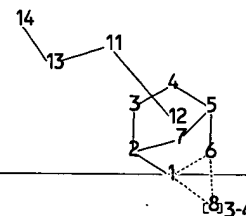
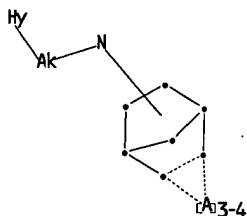


L Number	Hits	Search Text	DB	Time stamp
1	3461	((544/224) or (544/294) or (544/336) or (546/285) or (548/202) or (548/335.5) or (548/528) or (549/74) or (549/492)).CCLS.	USPAT; US-PGPUB; EPO; JPO; DERWENT	2003/07/09 19:34
2	6577	((514/247) or (514/252.1) or (514/256) or (514/365) or (514/427) or (514/400) or (514/438) or (514/471) or (514/357)).CCLS.	USPAT; US-PGPUB; EPO; JPO; DERWENT	2003/07/09 19:34
3	9390	((544/224) or (544/294) or (544/336) or (546/285) or (548/202) or (548/335.5) or (548/528) or (549/74) or (549/492)).CCLS.) or ((514/247) or (514/252.1) or (514/256) or (514/365) or (514/427) or (514/400) or (514/438) or (514/471) or (514/357)).CCLS.)	USPAT; US-PGPUB; EPO; JPO; DERWENT	2003/07/09 19:35
4	8029	octahydro\$	USPAT; US-PGPUB; EPO; JPO; DERWENT	2003/07/09 19:37
5	282	((544/224) or (544/294) or (544/336) or (546/285) or (548/202) or (548/335.5) or (548/528) or (549/74) or (549/492)).CCLS.) or ((514/247) or (514/252.1) or (514/256) or (514/365) or (514/427) or (514/400) or (514/438) or (514/471) or (514/357)).CCLS.) and octahydro\$	USPAT; US-PGPUB; EPO; JPO; DERWENT	2003/07/09 19:37



chain nodes :

11 13 14

ring nodes :

1 2 3 4 5 6 7 8

chain bonds :

11-13 13-14

ring bonds :

1-2 1-6 1-8 2-3 2-7 3-4 4-5 5-6 5-7 6-8

exact/norm bonds :

1-6 1-8 6-8 11-13 13-14

exact bonds :

1-2 2-3 2-7 3-4 4-5 5-6 5-7

isolated ring systems :

containing 1 :

Match level :

1:Atom 2:Atom 3:Atom 4:Atom 5:Atom 6:Atom 7:Atom 8:Atom 11:CLASS 12:CLASS

13:CLASS 14:Atom

Generic attributes :

13:

Saturation : Saturated

Number of Carbon Atoms : less than 7

14:

Number of Carbon Atoms : less than 7

Type of Ring System : Monocyclic

Element Count :

Node 13: Limited

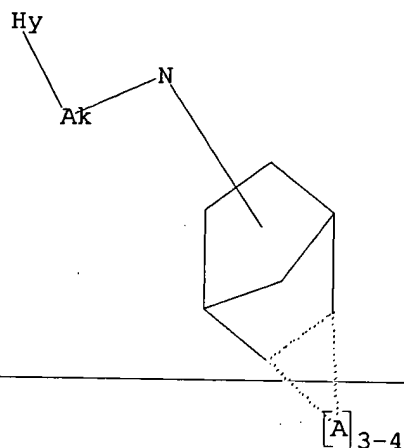
C,C1-5

10/020,241

=>
Uploading 10020241.str

L1 STRUCTURE UPLOADED

=> d l1
L1 HAS NO ANSWERS
L1 STR



Structure attributes must be viewed using STN Express query preparation.

=> s l1 sss sam
SAMPLE SEARCH INITIATED 19:17:02 FILE 'REGISTRY'
SAMPLE SCREEN SEARCH COMPLETED - 3249 TO ITERATE

30.8% PROCESSED 1000 ITERATIONS
INCOMPLETE SEARCH (SYSTEM LIMIT EXCEEDED)
SEARCH TIME: 00.00.01

1 ANSWERS

FULL FILE PROJECTIONS: ONLINE **COMPLETE**
 BATCH **COMPLETE**
PROJECTED ITERATIONS: 61563 TO 68397
PROJECTED ANSWERS: 1 TO 172

L2 1 SEA SSS SAM L1

=> s l1 sss ful
FULL SEARCH INITIATED 19:17:49 FILE 'REGISTRY'
FULL SCREEN SEARCH COMPLETED - 65351 TO ITERATE

100.0% PROCESSED 65351 ITERATIONS
SEARCH TIME: 00.00.01

72 ANSWERS

L3 72 SEA SSS FUL L1

=> s l3
L4 16 L3

=> d l4 1-16 bib,ab,hitstr

L4 ANSWER 1 OF 16 CAPLUS COPYRIGHT 2003 ACS
 AN 2002:503263 CAPLUS
 DN 137:78858
 TI Preparation of methanoindenylaminomethylheterocycles and related compounds as inhibitors of the sodium-proton exchanger.
 IN Heinelt, Uwe; Lang, Hans-Jochen; Wirth, Klaus; Jansen, Hans-Willi
 PA Aventis Pharma Deutschland G.m.b.H., Germany
 SO Ger. Offen., 20 pp.
 CODEN: GWXXBX
 DT Patent
 LA German
 FAN.CNT 1

Appl.
PCI

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	DE 10063294	A1	20020704	DE 2000-10063294	20001219
	WO 2002066431	A1	20020829	WO 2001-EP14422	20011207
	W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM			
	RW:	GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG			
	US 2002173500	A1	20021121	US 2001-20241	20011218

PRAI DE 2000-10063294 A 20001219

OS CASREACT 137:78858; MARPAT 137:78858

AB Title compds. [I; A = alkylene; T = H, alkyl; B = (substituted) (unsatd.) exo- or endo 5-6 membered ring; X = (unsatd.) 5-6 membered heterocyclyl; n = 0-4; with a proviso], were prepd. Thus, endo/exo-octahydro-4,7-methanoinden-5-ylamine (prepn. given), pyridine-3-carboxaldehyde, and p-toluenesulfonic acid were refluxed in PhMe through a water separator. The residue in MeOH was treated with NaBH₄ followed by acidification with HCl to give endo/exo-(octahydro-4,7-methanoinden-5-yl)pyridin-3-ylmethylamine hydrochloride. The latter showed rat Na⁺/H⁺ exchanger 3 (NHE3) inhibitory activity with IC₅₀ = 0.34 .mu.M.

IT 440114-58-9P 440114-63-6P 440114-68-1P
 440114-73-8P 440114-77-2P 440114-79-4P
 440114-81-8P 440114-85-2P 440114-90-9P
 440114-95-4P 440114-99-8P 440115-02-6P
 440115-06-0P 440115-10-6P 440115-13-9P
 440115-17-3P 440115-20-8P 440115-25-3P
 440115-30-0P 440115-34-4P 440115-38-8P
 440115-41-3P 440115-44-6P 440115-49-1P
 440115-54-8P 440115-57-1P 440115-76-4P
 440115-81-1P 440115-85-5P 440115-89-9P
 440115-93-5P 440115-97-9P 440116-01-8P
 440116-07-4P 440116-13-2P 440116-17-6P
 440116-23-4P 440116-27-8P 440116-32-5P
 440116-37-0P 440116-42-7P 440116-45-0P
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 440116-60-9P

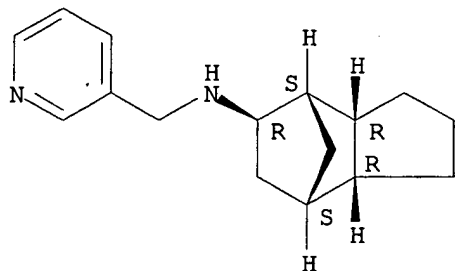
RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(prepn. of methanoindenylaminomethylheterocycles and related compds. as inhibitors of the sodium-proton exchanger)

RN 440114-58-9 CAPLUS

CN 3-Pyridinemethanamine, N-[(3aR,4S,5R,7S,7aR)-octahydro-4,7-methano-1H-inden-5-yl]-, dihydrochloride, rel- (9CI) (CA INDEX NAME)

Relative stereochemistry.

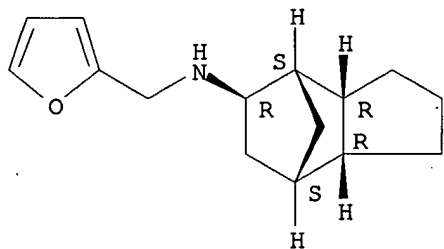


● 2 HCl

RN 440114-63-6 CAPLUS

CN 2-Furanmethanamine, N-[(3aR,4S,5R,7S,7aR)-octahydro-4,7-methano-1H-inden-5-yl]-, hydrochloride, rel- (9CI) (CA INDEX NAME)

Relative stereochemistry.

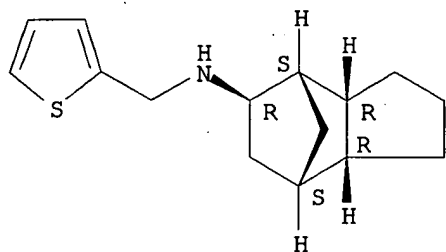


● HCl

RN 440114-68-1 CAPLUS

CN 2-Thiophenemethanamine, N-[(3aR,4S,5R,7S,7aR)-octahydro-4,7-methano-1H-inden-5-yl]-, hydrochloride, rel- (9CI) (CA INDEX NAME)

Relative stereochemistry.

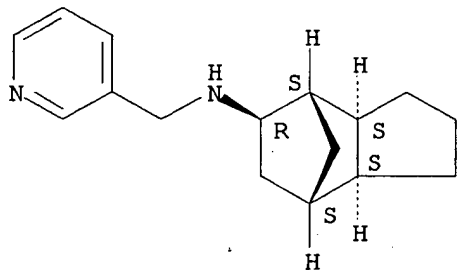


● HCl

RN 440114-73-8 CAPLUS

CN 3-Pyridinemethanamine, N-[(3aR,4R,5S,7R,7aR)-octahydro-4,7-methano-1H-inden-5-yl]-, dihydrochloride, rel- (9CI) (CA INDEX NAME)

Relative stereochemistry.



●2 HCl

RN 440114-77-2 CAPLUS

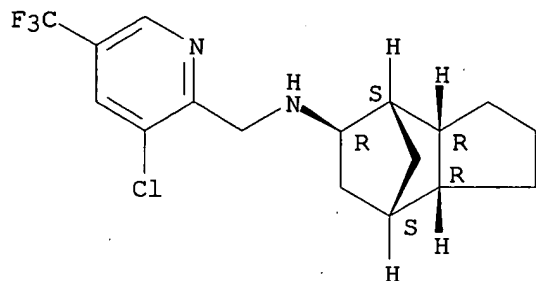
CN 2-Pyridinemethanamine, 3-chloro-N-[(3aR,4S,5R,7S,7aR)-octahydro-4,7-methano-1H-inden-5-yl]-5-(trifluoromethyl)-, rel-, trifluoroacetate (9CI) (CA INDEX NAME)

CM 1

CRN 440114-76-1

CMF C17 H20 Cl F3 N2

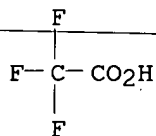
Relative stereochemistry.



CM 2

CRN 76-05-1

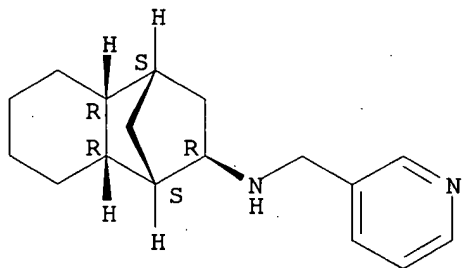
CMF C2 H F3 O2



RN 440114-79-4 CAPLUS

CN 3-Pyridinemethanamine, N-[(1R,2S,4R,4aS,8aS)-decahydro-1,4-methanonaphthalen-2-yl]-, dihydrochloride, rel- (9CI) (CA INDEX NAME)

Relative stereochemistry.

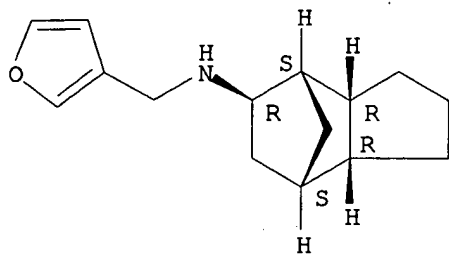


● 2 HCl

RN 440114-81-8 CAPLUS

CN 3-Furanmethanamine, N-[(3aR,4S,5R,7S,7aR)-octahydro-4,7-methano-1H-inden-5-yl]-, hydrochloride, rel- (9CI) (CA INDEX NAME)

Relative stereochemistry.

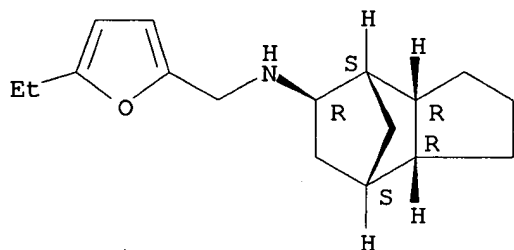


● HCl

RN 440114-85-2 CAPLUS

CN 2-Furanmethanamine, 5-ethyl-N-[(3aR,4S,5R,7S,7aR)-octahydro-4,7-methano-1H-inden-5-yl]-, hydrochloride, rel- (9CI) (CA INDEX NAME)

Relative stereochemistry.

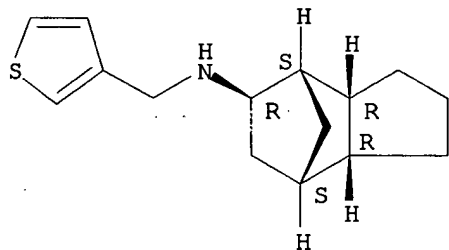


● HCl

RN 440114-90-9 CAPLUS

CN 3-Thiophenemethanamine, N-[(3aR,4S,5R,7S,7aR)-octahydro-4,7-methano-1H-inden-5-yl]-, hydrochloride, rel- (9CI) (CA INDEX NAME)

Relative stereochemistry.

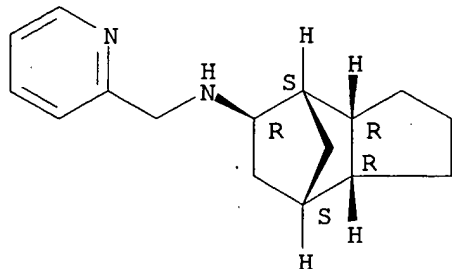


HCl

RN 440114-95-4 CAPLUS

CN 2-Pyridinemethanamine, N-[(3aR,4S,5R,7S,7aR)-octahydro-4,7-methano-1H-inden-5-yl]-, hydrochloride, rel- (9CI) (CA INDEX NAME)

Relative stereochemistry.

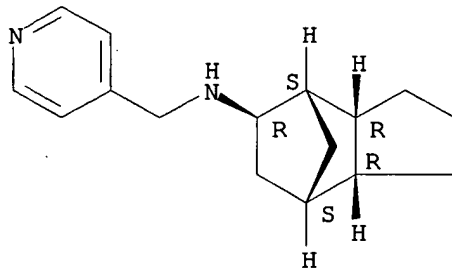


●x HCl

RN 440114-99-8 CAPLUS

CN 4-Pyridinemethanamine, N-[(3aR,4S,5R,7S,7aR)-octahydro-4,7-methano-1H-inden-5-yl]-, hydrochloride, rel- (9CI) (CA INDEX NAME)

Relative stereochemistry.

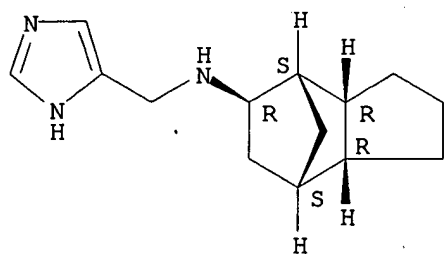


●x HCl

RN 440115-02-6 CAPLUS

CN 1H-Imidazole-4-methanamine, N-[(3aR,4S,5R,7S,7aR)-octahydro-4,7-methano-1H-inden-5-yl]-, hydrochloride, rel- (9CI) (CA INDEX NAME)

Relative stereochemistry.

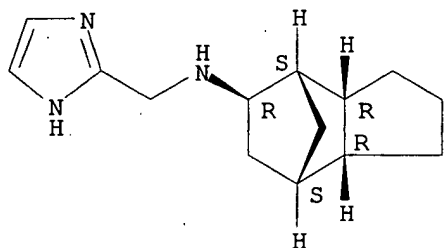


●x HCl

RN 440115-06-0 CAPLUS

CN 1H-Imidazole-2-methanamine, N-[(3aR,4S,5R,7S,7aR)-octahydro-4,7-methano-1H-inden-5-yl]-, hydrochloride, rel- (9CI) (CA INDEX NAME)

Relative stereochemistry.

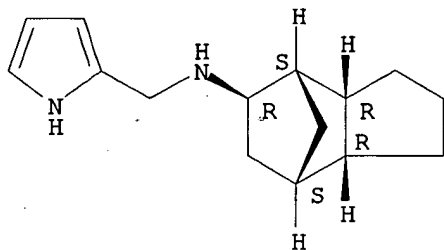


●x HCl

RN 440115-10-6 CAPLUS

CN 1H-Pyrrole-2-methanamine, N-[(3aR,4S,5R,7S,7aR)-octahydro-4,7-methano-1H-inden-5-yl]-, monohydrochloride, rel- (9CI) (CA INDEX NAME)

Relative stereochemistry.

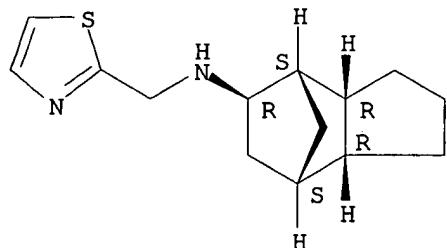


HCl

RN 440115-13-9 CAPLUS

CN 2-Thiazolemethanamine, N-[(3aR,4S,5R,7S,7aR)-octahydro-4,7-methano-1H-inden-5-yl]-, monohydrochloride, rel- (9CI) (CA INDEX NAME)

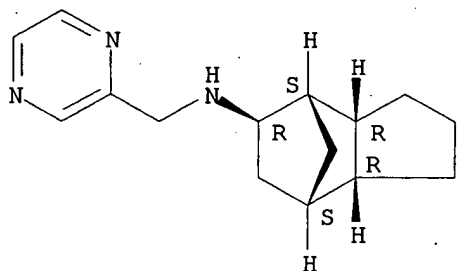
Relative stereochemistry.



● HCl

~~RN 440115-17-3 CAPLUS~~~~CN Pyrazinemethanamine, N-[(3aR,4S,5R,7S,7aR)-octahydro-4,7-methano-1H-inden-5-yl]-, hydrochloride, rel- (9CI) (CA INDEX NAME)~~

Relative stereochemistry.

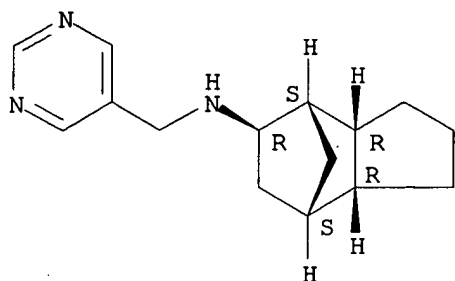


●x HCl

RN 440115-20-8 CAPLUS

CN 5-Pyrimidinemethanamine, N-[(3aR,4S,5R,7S,7aR)-octahydro-4,7-methano-1H-inden-5-yl]-, hydrochloride, rel- (9CI) (CA INDEX NAME)

Relative stereochemistry.

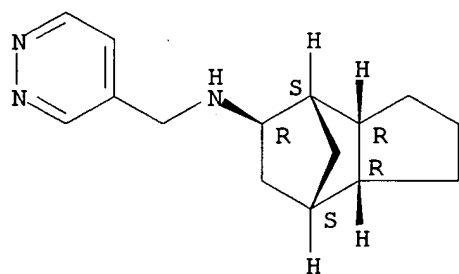


●x HCl

RN 440115-25-3 CAPLUS

CN 4-Pyridazinemethanamine, N-[(3aR,4S,5R,7S,7aR)-octahydro-4,7-methano-1H-inden-5-yl]-, hydrochloride, rel- (9CI) (CA INDEX NAME)

Relative stereochemistry.

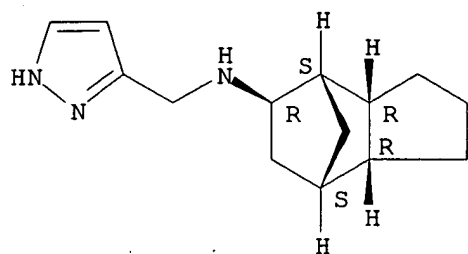


●x HCl

RN 440115-30-0 CAPLUS

CN 1H-Pyrazole-3-methanamine, N-[(3aR,4S,5R,7S,7aR)-octahydro-4,7-methano-1H-inden-5-yl]-, hydrochloride, rel- (9CI) (CA INDEX NAME)

Relative stereochemistry.

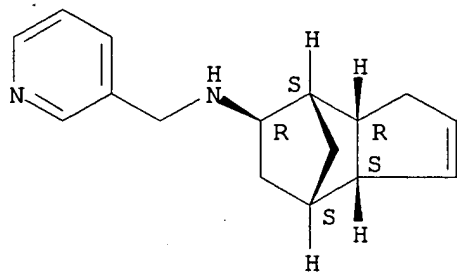


●x HCl

RN 440115-34-4 CAPLUS

CN 3-Pyridinemethanamine, N-[(3aR,4R,6S,7R,7aS)-3a,4,5,6,7,7a-hexahydro-4,7-methano-1H-inden-6-yl]-, hydrochloride, rel- (9CI) (CA INDEX NAME)

Relative stereochemistry.

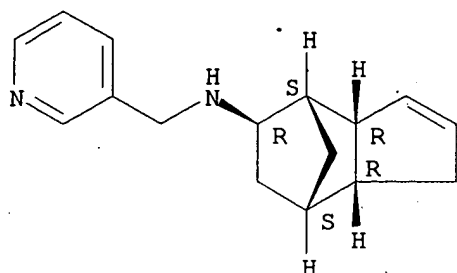


●x HCl

RN 440115-38-8 CAPLUS

CN 3-Pyridinemethanamine, N-[(3aR,4S,5R,7S,7aR)-3a,4,5,6,7,7a-hexahydro-4,7-methano-1H-inden-5-yl]-, hydrochloride, rel- (9CI) (CA INDEX NAME)

Relative stereochemistry.



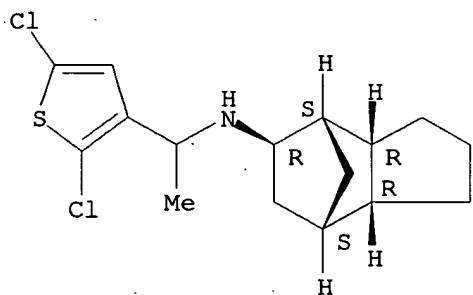
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RN 440115-41-3 CAPLUS
 CN 3-Thiophenemethanamine, 2,5-dichloro-.alpha.-methyl-N-[(3aR,4S,5R,7S,7aR)-octahydro-4,7-methano-1H-inden-5-yl]-, rel-, trifluoroacetate (9CI) (CA INDEX NAME)

CM 1

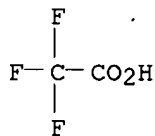
CRN 440115-40-2
 CMF C16 H21 Cl2 N S

Relative stereochemistry.



CM 2

CRN 76-05-1
 CMF C2 H F3 O2



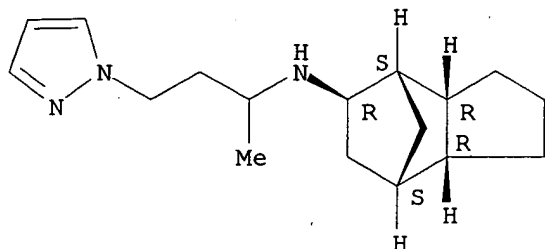
RN 440115-44-6 CAPLUS
 CN 1H-Pyrazole-1-propanamine, .alpha.-methyl-N-[(3aR,4S,5R,7S,7aR)-octahydro-4,7-methano-1H-inden-5-yl]-, rel-, trifluoroacetate (9CI) (CA INDEX NAME)

CM 1

CRN 440115-43-5

CMF C17 H27 N3

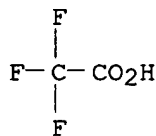
Relative stereochemistry.



CM 2

CRN 76-05-1

CMF C2 H F3 O2



RN 440115-49-1 CAPLUS

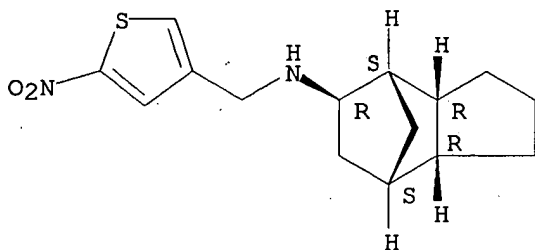
CN 3-Thiophenemethanamine, 5-nitro-N-[(3aR,4S,5R,7S,7aR)-octahydro-4,7-methano-1H-inden-5-yl]-, rel-, mono(trifluoroacetate) (9CI) (CA INDEX NAME)

CM 1

CRN 440115-48-0

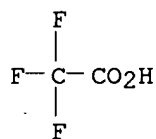
CMF C15 H20 N2 O2 S

Relative stereochemistry.



CM 2

CRN 76-05-1
CMF C2 H F3 O2

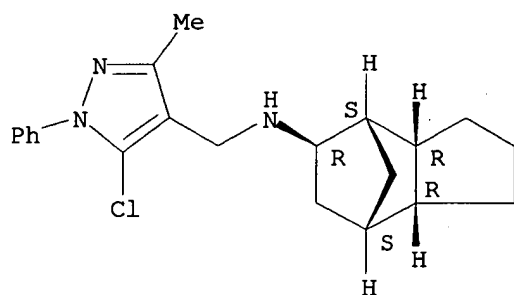


RN 440115-54-8 CAPLUS
CN 1H-Pyrazole-4-methanamine, 5-chloro-3-methyl-N-[(3aR,4S,5R,7S,7aR)-octahydro-4,7-methano-1H-inden-5-yl]-1-phenyl-, rel-, trifluoroacetate (9CI) (CA INDEX NAME)

CM 1

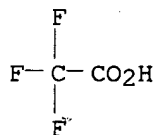
CRN 440115-53-7
CMF C21 H26 Cl N3

Relative stereochemistry.



CM 2

CRN 76-05-1
CMF C2 H F3 O2



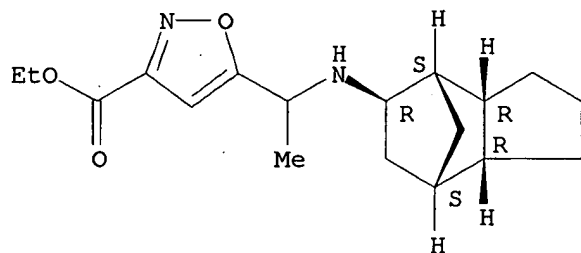
RN 440115-57-1 CAPLUS
CN 3-Isoxazolecarboxylic acid, 5-[1-[[[(3aR,4S,5R,7S,7aR)-octahydro-4,7-methano-1H-inden-5-yl]amino]ethyl]-, ethyl ester, rel-, trifluoroacetate (9CI) (CA INDEX NAME)

CM 1

CRN 440115-56-0

CMF C18 H26 N2 O3

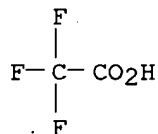
Relative stereochemistry.



CM 2

CRN 76-05-1

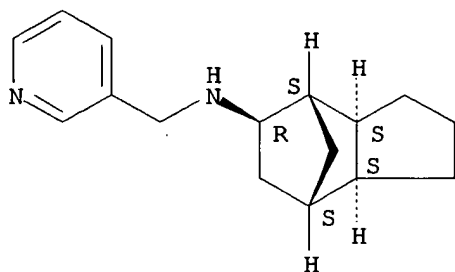
CMF C2 H F3 O2



RN 440115-76-4 CAPLUS

CN 3-Pyridinemethanamine, N-[(3aR,4R,5S,7R,7aR)-octahydro-4,7-methano-1H-inden-5-yl]-, rel- (9CI) (CA INDEX NAME)

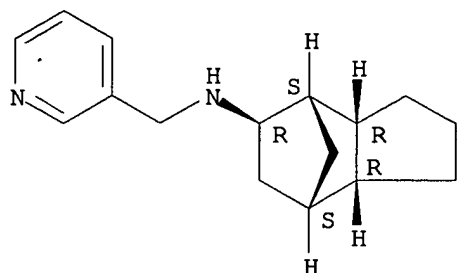
Relative stereochemistry.



RN 440115-81-1 CAPLUS

CN 3-Pyridinemethanamine, N-[(3aR,4S,5R,7S,7aR)-octahydro-4,7-methano-1H-inden-5-yl]-, rel- (9CI) (CA INDEX NAME)

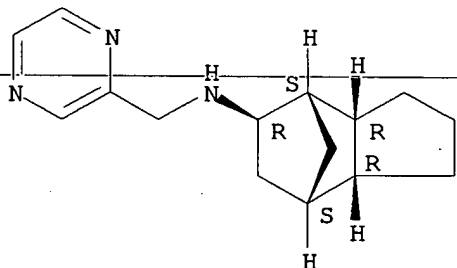
Relative stereochemistry.



RN 440115-85-5 CAPLUS

CN Pyrazinemethanamine, N-[(3aR,4S,5R,7S,7aR)-octahydro-4,7-methano-1H-inden-5-yl]-, rel- (9CI) (CA INDEX NAME)

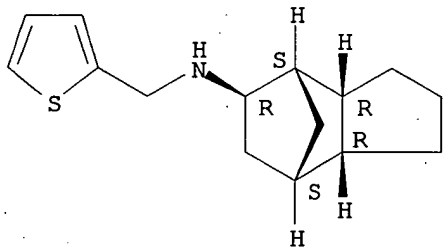
Relative stereochemistry.



RN 440115-89-9 CAPLUS

CN 2-Thiophenemethanamine, N-[(3aR,4S,5R,7S,7aR)-octahydro-4,7-methano-1H-inden-5-yl]-, rel- (9CI) (CA INDEX NAME)

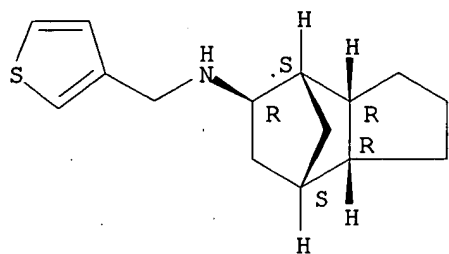
Relative stereochemistry.



RN 440115-93-5 CAPLUS

CN 3-Thiophenemethanamine, N-[(3aR,4S,5R,7S,7aR)-octahydro-4,7-methano-1H-inden-5-yl]-, rel- (9CI) (CA INDEX NAME)

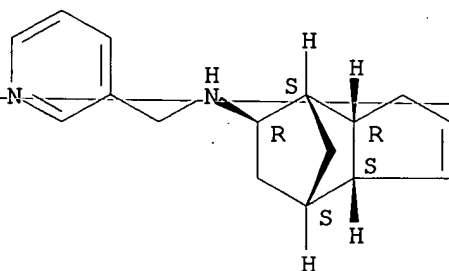
Relative stereochemistry.



RN 440115-97-9 CAPLUS

CN 3-Pyridinemethanamine, N-[(3aR,4R,6S,7R,7aS)-3a,4,5,6,7,7a-hexahydro-4,7-methano-1H-inden-6-yl]-, rel- (9CI) (CA INDEX NAME)

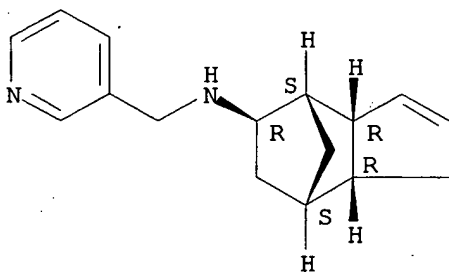
Relative stereochemistry.



RN 440116-01-8 CAPLUS

CN 3-Pyridinemethanamine, N-[(3aR,4S,5R,7S,7aR)-3a,4,5,6,7,7a-hexahydro-4,7-methano-1H-inden-5-yl]-, rel- (9CI) (CA INDEX NAME)

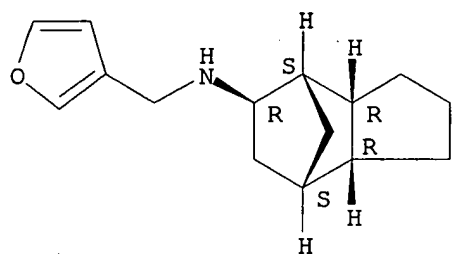
Relative stereochemistry.



RN 440116-07-4 CAPLUS

CN 3-Furanmethanamine, N-[(3aR,4S,5R,7S,7aR)-octahydro-4,7-methano-1H-inden-5-yl]-, rel- (9CI) (CA INDEX NAME)

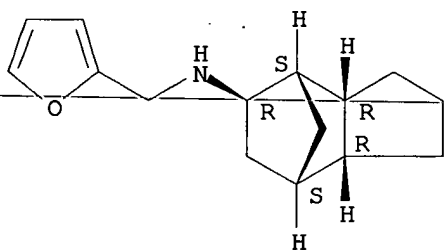
Relative stereochemistry.



RN 440116-13-2 CAPLUS

CN 2-Furanmethanamine, N-[(3aR,4S,5R,7S,7aR)-octahydro-4,7-methano-1H-inden-5-yl]-, rel- (9CI) (CA INDEX NAME)

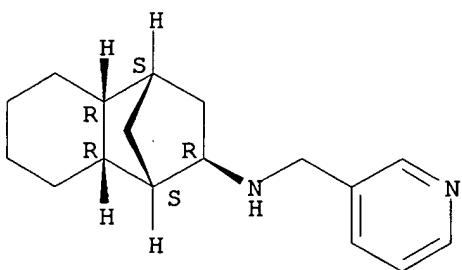
Relative stereochemistry.



RN 440116-17-6 CAPLUS

CN 3-Pyridinemethanamine, N-[(1R,2S,4R,4aS,8aS)-decahydro-1,4-methanonaphthalen-2-yl]-, rel- (9CI) (CA INDEX NAME)

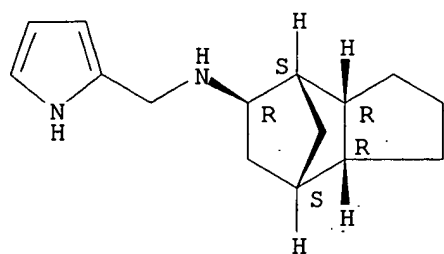
Relative stereochemistry.



RN 440116-23-4 CAPLUS

CN 1H-Pyrrole-2-methanamine, N-[(3aR,4S,5R,7S,7aR)-octahydro-4,7-methano-1H-inden-5-yl]-, rel- (9CI) (CA INDEX NAME)

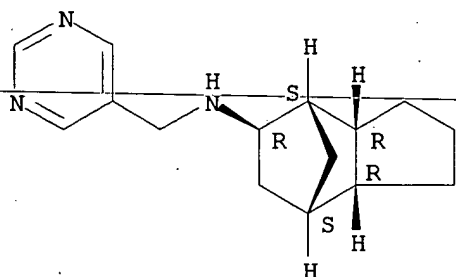
Relative stereochemistry.



RN 440116-27-8 CAPLUS

CN 5-Pyrimidinemethanamine, N-[(3aR,4S,5R,7S,7aR)-octahydro-4,7-methano-1H-inden-5-yl]-, rel- (9CI) (CA INDEX NAME)

Relative stereochemistry.



RN 440116-32-5 CAPLUS

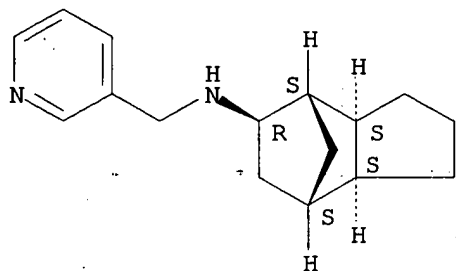
CN 3-Pyridinemethanamine, N-[(3aR,4R,5S,7R,7aR)-octahydro-4,7-methano-1H-inden-5-yl]-, rel-, trifluoroacetate (9CI) (CA INDEX NAME)

CM 1

CRN 440115-76-4

CMF C16 H22 N2

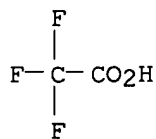
Relative stereochemistry.



CM 2

CRN 76-05-1

CMF C2 H F3 O2

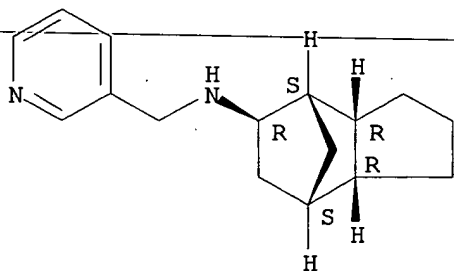


RN 440116-37-0 CAPLUS
 CN 3-Pyridinemethanamine, N-[(3aR,4S,5R,7S,7aR)-octahydro-4,7-methano-1H-inden-5-yl]-, rel-, trifluoroacetate (9CI) (CA INDEX NAME)

CM 1

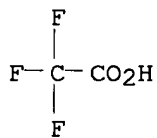
CRN 440115-81-1
 CMF C16 H22 N2

Relative stereochemistry.



CM 2

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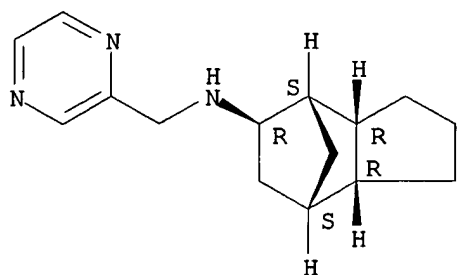


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 CN Pyrazinemethanamine, N-[(3aR,4S,5R,7S,7aR)-octahydro-4,7-methano-1H-inden-5-yl]-, rel-, trifluoroacetate (9CI) (CA INDEX NAME)

CM 1

CRN 440115-85-5
 CMF C15 H21 N3

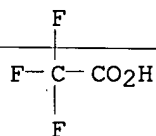
Relative stereochemistry.



CM 2

CRN 76-05-1

CMF C2 H F3 O2



RN 440116-45-0 CAPLUS

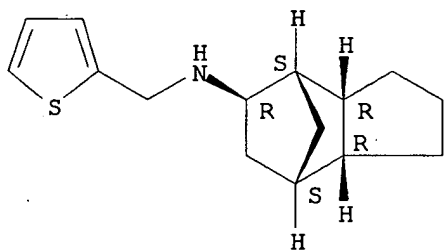
CN 2-Thiophenemethanamine, N-[(3aR,4S,5R,7S,7aR)-octahydro-4,7-methano-1H-inden-5-yl]-, rel-, trifluoroacetate (9CI) (CA INDEX NAME)

CM 1

CRN 440115-89-9

CMF C15 H21 N S

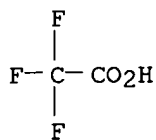
Relative stereochemistry.



CM 2

CRN 76-05-1

CMF C2 H F3 O2



RN 440116-49-4 CAPLUS

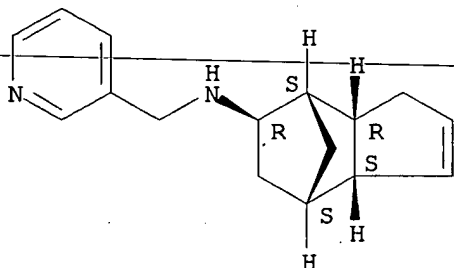
CN 3-Pyridinemethanamine, N-[(3aR,4R,6S,7R,7aS)-3a,4,5,6,7,7a-hexahydro-4,7-methano-1H-inden-6-yl]-, rel-, trifluoroacetate (9CI) (CA INDEX NAME)

CM 1

CRN 440115-97-9

CMF C16 H20 N2

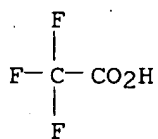
Relative stereochemistry.



CM 2

CRN 76-05-1

CMF C2 H F3 O2



RN 440116-53-0 CAPLUS

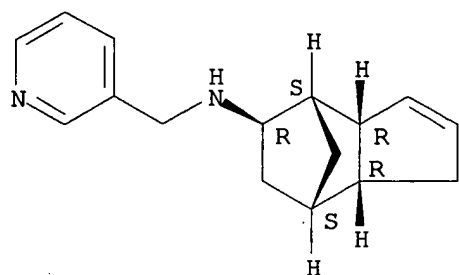
CN 3-Pyridinemethanamine, N-[(3aR,4S,5R,7S,7aR)-3a,4,5,6,7,7a-hexahydro-4,7-methano-1H-inden-5-yl]-, rel-, trifluoroacetate (9CI) (CA INDEX NAME)

CM 1

CRN 440116-01-8

CMF C16 H20 N2

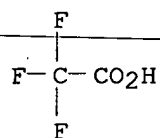
Relative stereochemistry.



CM 2

CRN 76-05-1

CMF C2 H F3 O2



RN 440116-57-4 CAPLUS

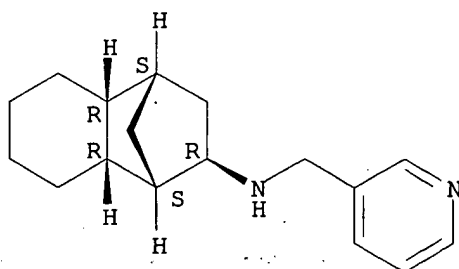
CN 3-Pyridinemethanamine, N-[(1R,2S,4R,4aS,8aS)-decahydro-1,4-methanonaphthalen-2-yl]-, rel-, trifluoroacetate (9CI) (CA INDEX NAME)

CM 1

CRN 440116-17-6

CMF C17 H24 N2

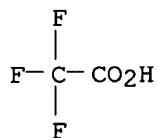
Relative stereochemistry.



CM 2

CRN 76-05-1

CMF C2 H F3 O2



RN 440116-60-9 CAPLUS

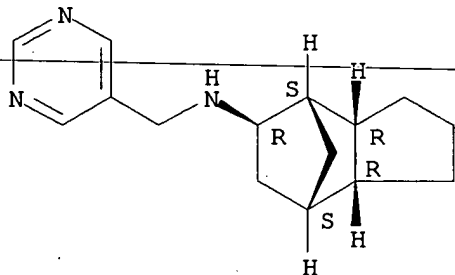
CN 5-Pyrimidinemethanamine, N-[(3aR,4S,5R,7S,7aR)-octahydro-4,7-methano-1H-inden-5-yl]-, rel-, trifluoroacetate (9CI) (CA INDEX NAME)

CM 1

CRN 440116-27-8

CMF C15 H21 N3

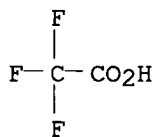
Relative stereochemistry.



CM 2

CRN 76-05-1

CMF C2 H F3 O2



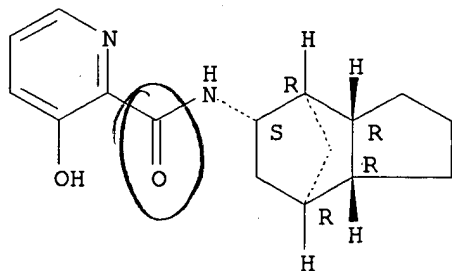
RE.CNT 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 2 OF 16 CAPLUS COPYRIGHT 2003 ACS
 AN 2001:152650 CAPLUS
 DN 134:207831
 TI Preparation, composition and use of heterocyclic aromatic amides as fungicides
 IN Ricks, Michael John; Dent, William Hunter, III; Rogers, Richard Brewer; Yao, Chenglin; Nader, Bassam Salim; Miesel, John Louis; Fitzpatrick, Gina Marie; Meyer, Kevin Gerald; Niyaz, Noormohamed Mohamed; Morrison, Irene Mae; Henry, Matthew James; Adamski, Butz Jenifer Lynn; Gajewski, Robert Peter
 PA Dow Agrosciences LLC, USA
 SO PCT Int. Appl., 200 pp.
 CODEN: PIXXD2
 DT Patent
 LA English
 FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2001014339	A2	20010301	WO 2000-US21523	20000804
	WO 2001014339	A3	20011115		
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	US 6355660	B1	20020312	US 2000-632930	20000804
	EP 1204643	A2	20020515	EP 2000-952599	20000804
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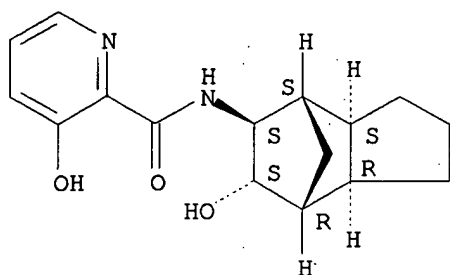
US 2003022903 A1 20030130 US 2001-23497 20011213
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 US 2000-620662 A 20000720
 US 1999-144676P P 19990720
 EP 2000-952599 A3 20000804
 US 2000-632930 A3 20000804
 WO 2000-US21523 W 20000804
 OS MARPAT 134:207831
 AB Title compds. [I; wherein X1-X4 independently = O, S, NR1, N, CR2, bond; R1 = H, C1-3 alkyl, C2-3 alkenyl, C2-3 alkynyl, OH, CHF2, C1-4 alkoxy; R2 = H, F, Cl, Br, CN, OH, C1-3 alkyl, C1-3 haloalkyl cyclopropyl, C1-3 alkoxy; Z = O, S, NOH, NOR3; R3 = C1-3 alkyl; A = C1-14 alkyl, C1-14 alkynyl, C1-14 cycloalkyl, aryl, heteroaryl, Q; M = H, Si(t-Bu)Me2, Si(Ph)Me2, SiEt3, C2R4, SO2R5; R4 = H, C1-6 alkyl, C2-6 alkenyl, C2-6 alkynyl; R5 = aryl, heteroaryl, C1-6 alkyl, C2-6 alkenyl, C3-6 alkenyl, C3-6 alkynyl, C3-6 cycloalkyl; X, Y independently = O, S; W = O, CH2, bond; R = C1-8 alkyl, C2-8 alkenyl, C2-8 alkynyl, C3-8 cycloalkyl, aryl, heteroaryl; R11 = H, C1-3 alkyl, C2-5 alkenyl, C2-5 alkynyl; R10 = H, R, OR, OCOR, OCOOR; R8, R9 independently = H, C1-6 alkyl, C2-6 alkenyl; R6, R7 independently = H, C1-6 alkyl, C2-6 alkenyl, C2-5 alkynyl, C3-6 cycloalkyl] are prepd. as fungicides involving application methods of effective usage of title compds. to control fungi, particularly plant pathogens and wood-decaying fungi. The invention also encompasses hydrates, salts and complexes thereof. The title compd. II was prepd. and tested as fungicide.
 IT 321597-85-7P 321597-86-8P 321598-57-6P
 321598-69-0P 321598-70-3P
 RL: AGR (Agricultural use); BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); USES (Uses) (prepn. and fungicidal activity of heterocyclic arom. amides)
 RN 321597-85-7 CAPLUS
 CN 2-Pyridinecarboxamide, 3-hydroxy-N-[(3aR,4R,5S,7R,7aR)-octahydro-4,7-methano-1H-inden-5-yl]-, rel- (9CI) (CA INDEX NAME)

Relative stereochemistry.



RN 321597-86-8 CAPLUS
 CN 2-Pyridinecarboxamide, 3-hydroxy-N-[(3aR,4R,5R,6R,7S,7aS)-octahydro-6-hydroxy-4,7-methano-1H-inden-5-yl]-, rel- (9CI) (CA INDEX NAME)

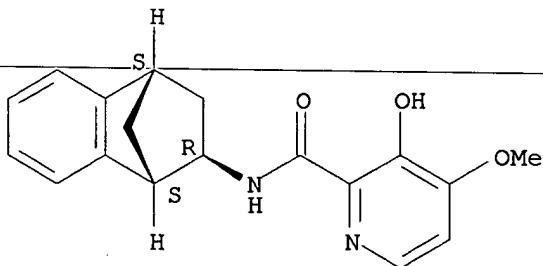
Relative stereochemistry.



RN 321598-57-6 CAPLUS

CN 2-Pyridinecarboxamide, 3-hydroxy-4-methoxy-N-[(1R,2S,4R)-1,2,3,4-tetrahydro-1,4-methanonaphthalen-2-yl]-, rel- (9CI) (CA INDEX NAME)

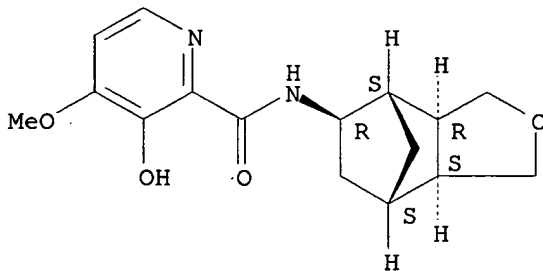
Relative stereochemistry.



RN 321598-69-0 CAPLUS

CN 2-Pyridinecarboxamide, 3-hydroxy-4-methoxy-N-[(3aR,4S,5R,7S,7aS)-octahydro-4,7-methanoisobenzofuran-5-yl]-, rel- (9CI) (CA INDEX NAME)

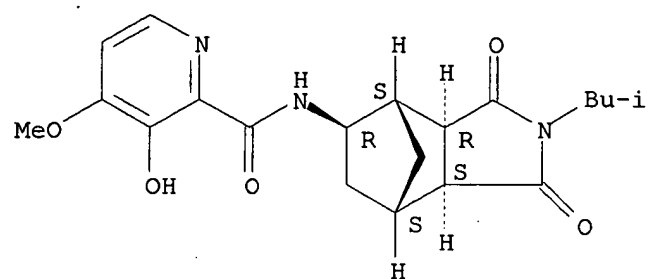
Relative stereochemistry.



RN 321598-70-3 CAPLUS

CN 2-Pyridinecarboxamide, 3-hydroxy-4-methoxy-N-[(3aR,4S,5R,7S,7aS)-octahydro-2-(2-methylpropyl)-1,3-dioxo-4,7-methano-1H-isoindol-5-yl]-, rel- (9CI) (CA INDEX NAME)

Relative stereochemistry.



L4 ANSWER 3 OF 16 CAPLUS COPYRIGHT 2003 ACS

AN 2001:63978 CAPLUS

DN 134:131431

TI Fungicidal heterocyclic aromatic amides and their compositions, methods of use and preparation

IN Ricks, Michael John; Dent, William Hunter, III; Rogers, Richard Brewer; Yao, Chenglin; Nader, Bassam Salim; Miesel, John Louis; Fitzpatrick, Gina Marie; Meyer, Kevin Gerald; Niyaz, Noormohamed Mohamed; Morrison, Irene Mae; Gajewski, Robert Peter

PA Dow Agrosiences LLC, USA

SO PCT Int. Appl., 159 pp.

CODEN: PIXXD2

DT Patent

LA English

FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2001005769	A2	20010125	WO 2000-US19794	20000720
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US	2002177578	A1	20021128	US 2001-22413	20011213
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US	2003022902	A1	20030130	US 2001-22483	20011213
US	2003022903	A1	20030130	US 2001-23497	20011213
PRAI	US 1999-144676P	P	19990720		
	US 1999-149977P	P	19990820		
	US 1999-150248P	P	19990823		
	WO 2000-US19794	W	20000720		
	US 2000-632930	A3	20000804		

OS MARPAT 134:131431

AB Title compds. I [W, X, Y, Z are selected from S, O, NR1, N, CR2 or bond and comprise a 5-6 membered (un)substituted heterocyclic ring; R1 = H, alkyl, alkenyl, alkynyl, OH, acyloxy, alkoxymethyl, CHF2, cyclopropyl, or alkoxy; R2 = H, halo, CN, OH, alkyl, haloalkyl, cyclopropyl, alkoxy, haloalkoxy, etc.; G = O, S or NOR3 where R3 = H or alkyl; A = (un)substituted alkyl, alkenyl, alkynyl, cycloalkyl, unsatd. cycloalkyl, heterocycle, bi or tricyclic ring system which may contain heteroatoms, aryl or heteroaryl, etc.] bearing a hydroxy group adjacent to the amide functionality are prepd. and disclosed as antifungal agents, particularly for plants. Thus, pyridinyl carboxamide II was prepd. via amidation of 3-benzyloxy-6-bromo-4-methoxypyridin-2-carbonyl chloride with 4-(4-trifluoromethylphenoxy)aniline with subsequent deprotection. The preferred fungicidal compn. consists of a compd. of formula I with a phytol. acceptable carrier. Activity has been demonstrated against a variety of fungi, e.g., Plasmopara viticola (Downy Mildew of Grape),

Phytophthora infestans (Late Blight of Tomato), and Venturia inaequalis (Apple Scab). I is both useful for eradication and prevention of fungal attack.

IT 321597-85-7P 321597-86-8P 321598-57-6P

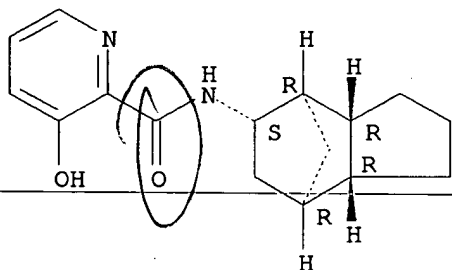
321598-69-0P 321598-70-3P

RL: AGR (Agricultural use); BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); USES (Uses) (prepn. and fungicidal activity of heterocyclic arom. amides)

RN 321597-85-7 CAPLUS

CN 2-Pyridinecarboxamide, 3-hydroxy-N-[(3aR,4R,5S,7R,7aR)-octahydro-4,7-methano-1H-inden-5-yl]-, rel- (9CI) (CA INDEX NAME)

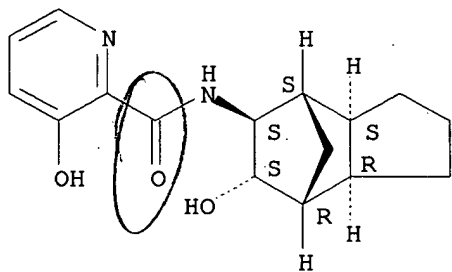
Relative stereochemistry.



RN 321597-86-8 CAPLUS

CN 2-Pyridinecarboxamide, 3-hydroxy-N-[(3aR,4R,5R,6R,7S,7aS)-octahydro-6-hydroxy-4,7-methano-1H-inden-5-yl]-, rel- (9CI) (CA INDEX NAME)

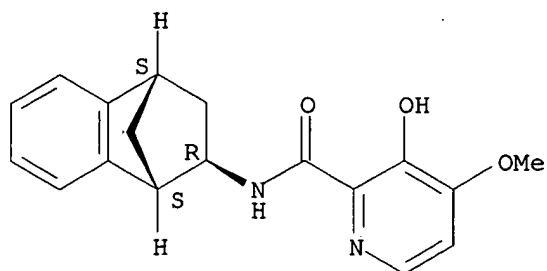
Relative stereochemistry.



RN 321598-57-6 CAPLUS

CN 2-Pyridinecarboxamide, 3-hydroxy-4-methoxy-N-[(1R,2S,4R)-1,2,3,4-tetrahydro-1,4-methanonaphthalen-2-yl]-, rel- (9CI) (CA INDEX NAME)

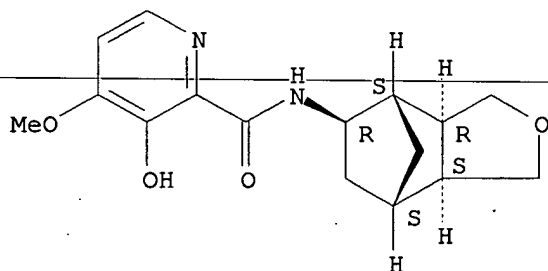
Relative stereochemistry.



RN 321598-69-0 CAPLUS

CN 2-Pyridinecarboxamide, 3-hydroxy-4-methoxy-N-[(3aR,4S,5R,7S,7aS)-octahydro-4,7-methanoisobenzofuran-5-yl]-, rel- (9CI) (CA INDEX NAME)

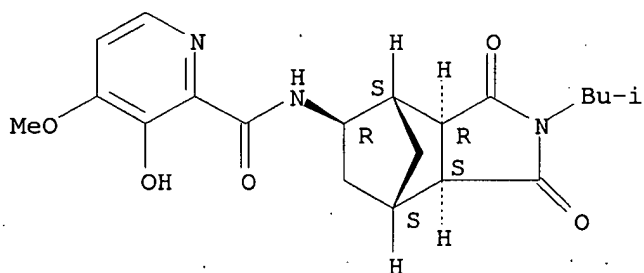
Relative stereochemistry.



RN 321598-70-3 CAPLUS

CN 2-Pyridinecarboxamide, 3-hydroxy-4-methoxy-N-[(3aR,4S,5R,7S,7aS)-octahydro-2-(2-methylpropyl)-1,3-dioxo-4,7-methano-1H-isoindol-5-yl]-, rel- (9CI) (CA INDEX NAME)

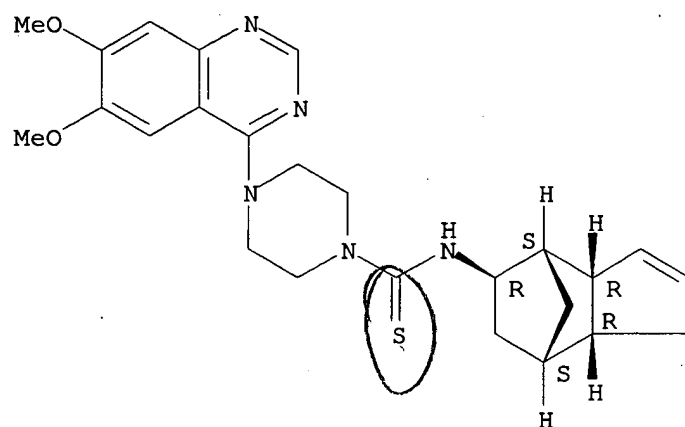
Relative stereochemistry.



L4 ANSWER 4 OF 16 CAPLUS COPYRIGHT 2003 ACS
 AN 2001:10086 CAPLUS
 DN 134:86277
 TI 1,3-Diazines with platelet-derived growth factor receptor inhibitory activity
 IN Matsuno, Kenji; Ichimura, Michio; Nomoto, Yuji; Fujiwara, Shigeki; Ide, Shinichi; Tsukuda, Eiji; Irie, Junko; Oda, Shoji
 PA Kyowa Hakko Kogyo Co., Ltd., Japan
 SO U.S., 127 pp., Cont.-in-part of PCT 9814431.
 CODEN: USXXAM
 DT Patent
 LA English
 FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 6169088	B1	20010102	US 1998-88199	19980601
	WO 9814431	A1	19980409	WO 1997-JP3510	19971001
	W: AU, BG, BR, CA, CN, CZ, HU, JP, KR, MX, NO, NZ, PL, RO, SG, SI, SK, UA, US, VN, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
	RW: AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
	US 6207667	B1	20010327	US 2000-481544	20000112
	US 2002068734	A1	20020606	US 2000-734918	20001213
	US-6472391	B2	20021029		
PRAI	JP 1996-260743	A	19960110		
	WO 1997-JP3510	A2	19971001		
	US 1998-88199	A3	19980601		
	US 2000-481544	A3	20000112		
OS	MARPAT 134:86277				
AB	<p>1,3-Diazines and related N heterocycles [I; wherein V = O or S; W = 1,4-piperazinediyl or 1,4-homopiperazinediyl which may be substituted with unsubstituted alkyl on the ring; X = N or CR9; Y = N or CR8; Z = N or CR7, with at least one of X, Y and Z being N; R1 = H, (un)substituted alkyl, cycloalkyl, aryl, heterocyclyl, etc.; R2 = substituted alkyl, (un)substituted cycloalkyl, aryl, heterocyclyl, etc.; R3, R4, R5, R6 = H, halo, (un)substituted alkyl, NO2, cyano, (un)substituted OH or NH2, etc.; R7, R8 = R1 groups, halo, etc.; R9 = H, CO2H or derivs.] and their pharmacol. acceptable salts are prepd. These compds. inhibit the phosphorylation of PDGF receptors and the abnormal proliferation or migration of cells, and so are effective in preventing or treating cell proliferative diseases such as arteriosclerosis, vascular reocclusion diseases, cancer, and glomerulosclerosis. Thus, 6,7-dimethoxy-4-(1-piperazinyl)quinazoline reacted with Ph isocyanate in refluxing EtOH to give invention compd. II [R = CONHPh] in 44% isolated yield. The analog II [R = Q] showed an IC50 of 0.03 .mu.M for inhibiting the phosphorylation of PDGF receptor in vitro. Pharmaceutical formulations, e.g. tablets contg. II [R = N-(p-nitrophenyl)carbamoyl], were prepd.</p>				
IT	<p>205264-16-0P RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses) (prepn. of 1,3-diazines with platelet-derived growth factor receptor inhibitory activity)</p>				
RN	205264-16-0 CAPLUS				
CN	<p>1-Piperazinecarbothioamide, 4-(6,7-dimethoxy-4-quinazolinyl)-N-[(3aR,4S,5R,7S,7aR)-3a,4,5,6,7,7a-hexahydro-4,7-methano-1H-inden-5-yl]-, rel- (9CI) (CA INDEX NAME)</p>				

Relative stereochemistry.



RE.CNT 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 5 OF 16 CAPLUS COPYRIGHT 2003 ACS
 AN 2000:53602 CAPLUS
 DN 132:108299
 TI Preparation of precursors for PNA monomers
 IN Martens, Jurgen; Maison, Wolfgang; Schlemminger, Imre; Westerhoff, Ole;
 Groger, Harald
 PA Germany
 SO PCT Int. Appl., 72 pp.
 CODEN: PIXXD2
 DT Patent
 LA English
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2000002864	A1	20000120	WO 1998-EP4281	19980710
	W: AT, AU, BG, BR, CA, CH, CN, CZ, DE, DK, ES, FI, GB, HR, HU, IL, JP, KR, LU, MK, MX, NO, NZ, PL, PT, RU, SE, SI, TR, US, YU				
	RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
	AU 9890645	A1	20000201	AU 1998-90645	19980710
PRAI	WO 1998-EP4281	A	19980710		
OS	MARPAT 132:108299				

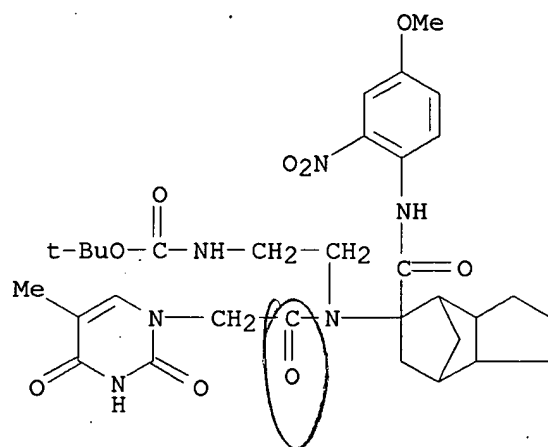
AB ~~Compds. X=CO-E-N(D-Y)CO-A-B [A is a single bond, o-phenylene, or a group (CR1R2)n (n = 1-3, R1, R2 = H, OH, amino, F, Cl, Br, iodo, aryl, or alkyl optionally substituted by amino, hydroxy, alkoxy, or alkylthio); B = H, alkyl, nucleobases, arom. or heterocyclic moieties, DNA intercalators, nucleobase-binding groups, reporter ligands, vinyl, Cl, Br, iodo, OH; D = o-phenylene or CR3R4CR5R6 (R3, R4, R5, R6 = H, alkyl, or aryl optionally substituted by alkyl, OH, alkoxy, nitro, aryl, alkoxycarbonyl, halo, or carbohydrate moieties or R3 and R5 or R3 and R4 taken together complete an alicyclic system); E is CR7R8 (R7, R8 = H, alkyl, or aryl optionally substituted by alkyl, OH, alkoxy, nitro, aryl, alkoxycarbonyl, halo, or carbohydrate moieties or R7 and R8 taken together complete an alicyclic or heterocyclic system which may be substituted by alkyl, OH, alkoxy, nitro, aryl, alkoxycarbonyl, or halo groups); X is R10R11:CR9NH (R9, R10, R11 = H, alkyl, or aryl or R9 and R10 taken together with the vinyl group complete a five- or six-membered alicyclic system or a heteroarom. system, each of which may be substituted); Y is NR12R13 (R12, R13 = H, an amino protecting group, OR14 or SR14, where R14 is H or a protecting group)] were prep'd. as precursors for PNA monomers. Thus, 1-cyclohexenyl isocyanide was added to a stirred mixt. of mono-Boc-ethylenediamine (Boc = tert-butoxycarbonyl), 4-nitrobenzaldehyde, and N4-Z-N-1-carboxymethylcytosine (Z = benzyloxycarbonyl) in methanol and the mixt. heated for five minutes to reflux and stirred for 48 h at room temp. to afford 36% rac-2-[(2'-Boc-aminoethyl)-N4-Z-cytosineacetyl-amino]-p-nitrophenylacetic acid cyclohexen-1''-ylamide.~~

IT **255736-48-2P**

RL: SPN (Synthetic preparation); PREP (Preparation).
 (prepn. of precursors for PNA monomers)

RN 255736-48-2 CAPLUS

CN Carbamic acid, [2-[[[(3,4-dihydro-5-methyl-2,4-dioxo-1(2H)-pyrimidinyl)acetyl][octahydro-5-[[[4-methoxy-2-nitrophenyl)amino]carbonyl]-4,7-methano-1H-inden-5-yl]amino]ethyl]-, 1,1-dimethylethyl ester (9CI)
 (CA INDEX NAME)



RE.CNT 4

THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 6 OF 16 CAPLUS COPYRIGHT 2003 ACS

AN 1998:219795 CAPLUS

DN 128:257447

TI Preparation of nitrogenous heterocyclic compounds inhibiting phosphorylation of platelet-derived growth factors (PDGF) receptors

IN Matsuno, Kenji; Ichimura, Michio; Nomoto, Yuji; Fujiwara, Shigeki; Ide, Shinichi; Tsukuda, Eiji; Irie, Junko; Oda, Shoji

PA Kyowa Hakko Kogyo Co., Ltd., Japan; Matsuno, Kenji; Ichimura, Michio; Nomoto, Yuji; Fujiwara, Shigeki; Ide, Shinichi; Tsukuda, Eiji; Irie, Junko; Oda, Shoji

SO PCT Int. Appl., 312 pp.

CODEN: PIXXD2

DT Patent

LA Japanese

FAN.CNT 2

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9814431	A1	19980409	WO 1997-JP3510	19971001
W: AU, BG, BR, CA, CN, CZ, HU, JP, KR, MX, NO, NZ, PL, RO, SG, SI, SK, UA, US, VN, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
CA 2239227	AA	19980409	CA 1997-2239227	19971001
AU 9744708	A1	19980424	AU 1997-44708	19971001
AU 719392	B2	20000511		
EP 882717	A1	19981209	EP 1997-943133	19971001
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
CN 1208404	A	19990217	CN 1997-191741	19971001
MX 9804356	A	20000831	MX 1998-4356	19980601
US 6169088	B1	20010102	US 1998-88199	19980601
US 6207667	B1	20010327	US 2000-481544	20000112
US 2002068734	A1	20020606	US 2000-734918	20001213
US 6472391	B2	20021029		
PRAI JP 1996-260743	A	19961001		
WO 1997-JP3510	W	19971001		
US 1998-88199	A3	19980601		
US 2000-481544	A3	20000112		

OS MARPAT 128:257447

AB Nitrogenous heterocyclic compds. of general formula [I; wherein V is oxygen or sulfur; W is 1,4-piperazinediyl or 1,4-homopiperazinediyl which may be substituted with unsubstituted alkyl on the ring; X is nitrogen or C-R9; Y is nitrogen or C-R8; Z is nitrogen or C-R7, with at least one of X, Y and Z being nitrogen; R1 is hydrogen, substituted or unsubstituted alkyl, substituted or unsubstituted cycloalkyl or the like; R2 is substituted alkyl, substituted or unsubstituted cycloalkyl or the like; R3, R4, R5 and R6 are each independently hydrogen, halogeno, substituted or unsubstituted alkyl, nitro, cyano, (un)substituted OH or NH2 or the like; R7, R8 = R1, halogeno or the like; R9 is hydrogen or acyl] and pharmacol. acceptable salts thereof are prepd. These compds. inhibit the phosphorylation of PDGF acceptors and the abnormal proliferation or migration of cells and so are effective in preventing or treating cell proliferative diseases such as arterial sclerosis, vascular reocclusion diseases, cancer, and glomerulosclerosis. Thus, 6,7-dimethoxy-4-piperazinylquinazoline was dissolved in ethanol, followed by adding Ph isocyanate, and the resulting mixt. was heated at reflux for 10 min to give 4(4-quinazolinyl)piperazine deriv. (II; R = CONHPh). II (R = Q) in vitro showed IC50 of 0.03 .mu.M for inhibiting the phosphorylation of PDGF receptor. Pharmaceutical formulations, e.g. tablet contg. II (R =

N-p-nitrophenylcarbamoyl), were prepd.

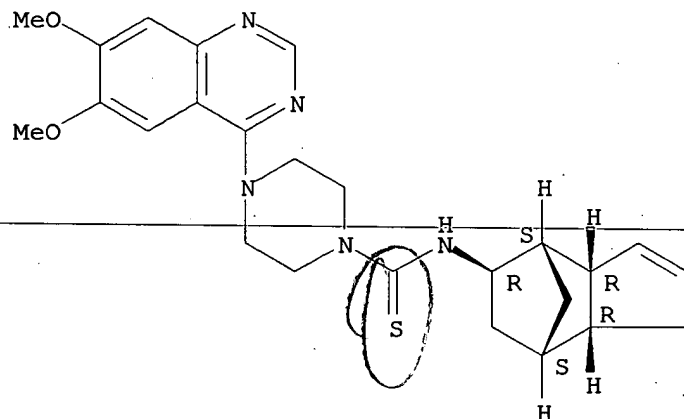
IT 205264-16-0P

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(prepn. of nitrogenous heterocyclic compds. inhibiting phosphorylation of platelet-derived growth factors (PDGF) receptors)

RN 205264-16-0 CAPLUS

CN 1-Piperazinecarbothioamide, 4-(6,7-dimethoxy-4-quinazolinyl)-N-[(3aR,4S,5R,7S,7aR)-3a,4,5,6,7,7a-hexahydro-4,7-methano-1H-inden-5-yl]-, rel- (9CI) (CA INDEX NAME)

Relative stereochemistry.



RE.CNT 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 7 OF 16 CAPLUS COPYRIGHT 2003 ACS
 AN 1997:311258 CAPLUS
 DN 127:5085
 TI Pyrazole derivatives as cannabinoid receptor agonists
 IN Barth, Francis; Casellas, Pierre; Congy, Christian; Martinez, Serge;
 Rinaldi, Murielle; Anne-Archard, Gilles
 PA Sanofi, Fr.
 SO U.S., 45 pp., Cont.-in-part of U.S. Ser. No. 168,237, abandoned.
 CODEN: USXXAM
 DT Patent
 LA English
 FAN.CNT 3

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 5624941	A	19970429	US 1994-348881	19941129
	FR 2692575	A1	19931224	FR 1992-7645	19920623
	FR 2692575	B1	19950630		
	FR 2713224	A1	19950609	FR 1993-14444	19931202
	FR 2713224	B1	19960301		
	FR 2713225	A1	19950609	FR 1994-8974	19940720
	FR 2713225	B1	19960301		
	ZA 9409342	A	19951009	ZA 1994-9342	19941124
	JP 2001026541	A2	20010130	JP-2000-238472	19941202
PRAI	FR 1992-7645	A	19920623		
	US 1993-79870	B2	19930623		
	FR 1993-14444	A	19931202		
	US 1993-168237	B2	19931217		
	FR 1994-8974	A	19940720		
	JP 1994-300016	A3	19941202		

OS MARPAT 127:5085

AB Title compds. I [R, R1 = (un)substituted Ph; R2 = H, alkyl; R3 = amino, (un)substituted alkyl, cycloalkyl aryl, heterocyclic; X = bond, NR4, CH2NR4; R4 = H, alkyl] were prepd. and have cannabinoid receptor affinity (no data). Thus, 4-ClC6H4COEt was treated with EtO2CCO2Et to give 4-ClC6H4C(OLi):CMcCOCO2Et which was cyclized with 2,4-Cl2C6H3NHNH2 to give I [R = 2,4-Cl2C6H3, R1 = 4-ClC6H4, R2 = Me, X = bond, R3 = OEt]. The ester was hydrolyzed to the acid, converted to the chloride, and amidated with 1-aminopiperidine to give I [R = 2,4-Cl2C6H3, R1 = 4-ClC6H4, R2 = Me, X = bond, R3 = piperidinoamino].

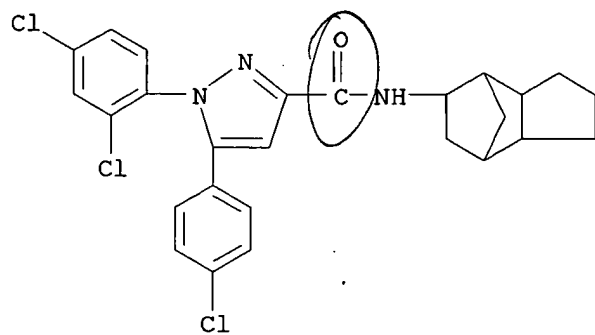
IT 158939-48-1P

RL: SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
 (prepn. of diarylpyrazoles as cannabinoid receptor agonists)

RN 158939-48-1 CAPLUS

CN 1H-Pyrazole-3-carboxamide, 5-(4-chlorophenyl)-1-(2,4-dichlorophenyl)-N-(octahydro-4,7-methano-1H-inden-5-yl)- (9CI) (CA INDEX NAME)

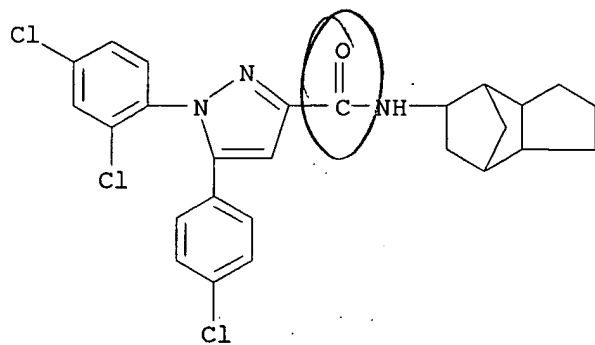
10/020,241



L4 ANSWER 8 OF 16 CAPLUS COPYRIGHT 2003 ACS
 AN 1994:680631 CAPLUS
 DN 121:280631
 TI Preparation of pyrazole derivatives as cannabinoid receptor ligands
 IN Barth, Francis; Casellas, Pierre; Congy, Christian; Martinez, Serge;
 Carmona, Murielle
 PA Elf Sanofi, Fr.
 SO Eur. Pat. Appl., 66 pp.
 CODEN: EPXXDW
 DT Patent
 LA French
 FAN.CNT 3

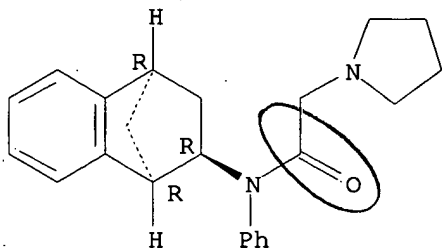
	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 576357	A1	19931229	EP 1993-401614	19930623
	EP 576357	B1	19970305		
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, NL, PT, SE				
	FR 2692575	A1	19931224	FR 1992-7645	19920623
	FR 2692575	B1	19950630		
	CZ 289487	B6	20020213	CZ 1993-1172	19930616
	BR 9302435	A	19940111	BR 1993-2435	19930621
	CA 2098944	AA	19931224	CA 1993-2098944	19930622
	NO 9302296	A	19931227	NO 1993-2296	19930622
	IL 106099	A1	19980715	IL 1993-106099	19930622
	RU 2119917	C1	19981010	RU 1993-49108	19930622
	TW 494096	B	20020711	TW 1993-82104910	19930622
	AU 9341438	A1	19940106	AU 1993-41438	19930623
	AU 664281	B2	19951109		
	HU 64526	A2	19940128	HU 1993-1851	19930623
	HU 218797	B	20001228		
	ZA 9304511	A	19940222	ZA 1993-4511	19930623
	JP 06073014	A2	19940315	JP 1993-176049	19930623
	JP 3238801	B2	20011217		
	AT 149489	E	19970315	AT 1993-401614	19930623
	ES 2101258	T3	19970701	ES 1993-401614	19930623
PRAI	FR 1992-7645	A	19920623		
OS	MARPAT 121:280631				
AB	Title compds. [I; R = NR1R2, R2[X = (CH2)xNR3], R5(X = bond); R1,R2 = alkyl, Ph, heterocyclyl, etc.; NR1R2 = heterocyclyl; R3,R4 = H, alkyl; R5 = (cyclo)alkyl, phenylalkyl, etc.; R6,R7 = (substituted)Ph; X = bond, (CH2)xNR3; x = 0 or 1] were prepd. as cannabinoid receptor ligands (no data). Thus, 4-ClC6H4COME was condensed with CH2(CO2Et)2 in NaOMe/MeOH and the product condensed with 2,4-Cl2C6H3NHNH2 to give I (R4 = H, R6 = 2,4-Cl2C6H3, R7 = 4-ClC6H4, X = bond) (II; R = OMe) and the corresponding acid chloride(2 steps) was condensed with 2-adamantanamine to give II (R = 2-adamantyl).				
IT	158939-48-1P				
	RL: SPN (Synthetic preparation); PREP (Preparation) (prepn. of, as cannabinoid receptor ligand)				
RN	158939-48-1 CAPLUS				
CN	1H-Pyrazole-3-carboxamide, 5-(4-chlorophenyl)-1-(2,4-dichlorophenyl)-N-(octahydro-4,7-methano-1H-inden-5-yl)- (9CI) (CA INDEX NAME)				

10/020,241



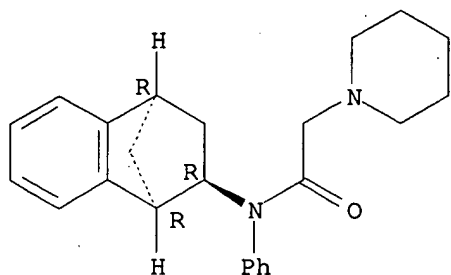
L4 ANSWER 9 OF 16 CAPLUS COPYRIGHT 2003 ACS
 AN 1985:498330 CAPLUS
 DN 103:98330
 TI Amides of N-phenylbenzonorbornen-2-endo-amine with hypotensive and other activities
 AU Longobardi, M.; Schenone, P.; Bargagna, A.; Berrino, L.; Matera, C.; Marmo, E.
 CS Ist. Sci. Farm., Univ. Genova, Genoa, Italy
 SO Farmaco, Edizione Scientifica (1985), 40(3), 152-61
 CODEN: FRPSAX; ISSN: 0430-0920
 DT Journal
 LA English
 AB The title compds. I (R = Me, cyclopropyl, CH:CHPh, (un)substituted Ph, CH₂NEt₂, pyrrolidinomethyl, etc.) were prepd. and tested for pharmacol. activity. Some I showed a marked hypotensive activity in rats, whereas most I induced a moderate local anesthesia in mice. I affected the heart rate and had a weak antiarrhythmic activity.
 IT 96356-24-0P 96356-25-1P 96356-26-2P 96356-27-3P
 RL: BAC (Biological activity or effector, except adverse); BPR (Biological process); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); PROC (Process); USES (Uses)
 (prepn. and pharmacol. of)
 RN 96356-24-0 CAPLUS
 CN 1-Pyrrolidineacetamide, N-phenyl-N-(1,2,3,4-tetrahydro-1,4-methanonaphthalen-2-yl)-, (1.alpha.,2.beta.,4.alpha.)- (9CI) (CA INDEX NAME)

Relative stereochemistry.



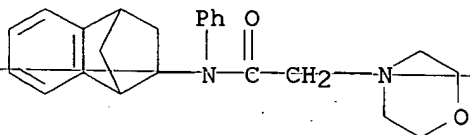
RN 96356-25-1 CAPLUS
 CN 1-Piperidineacetamide, N-phenyl-N-(1,2,3,4-tetrahydro-1,4-methanonaphthalen-2-yl)-, (1.alpha.,2.beta.,4.alpha.)- (9CI) (CA INDEX NAME)

Relative stereochemistry.



RN 96356-26-2 CAPLUS

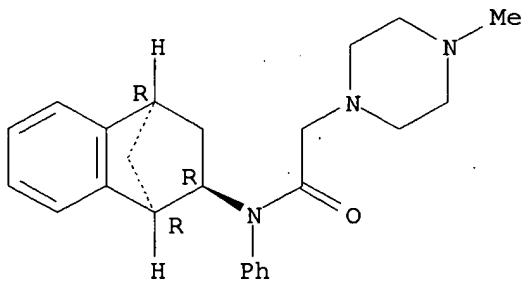
CN 4-Morpholineacetamide, N-phenyl-N-(1,2,3,4-tetrahydro-1,4-methanonaphthalen-2-yl)-, (1.alpha.,2.beta.,4.alpha.)- (9CI) (CA INDEX NAME)



RN 96356-27-3 CAPLUS

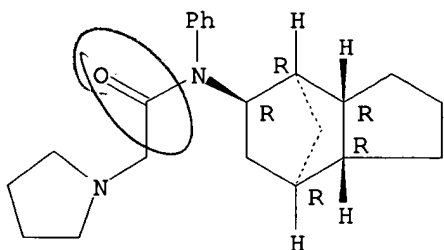
CN 1-Piperazineacetamide, 4-methyl-N-phenyl-N-(1,2,3,4-tetrahydro-1,4-methanonaphthalen-2-yl)-, (1.alpha.,2.beta.,4.alpha.)- (9CI) (CA INDEX NAME)

Relative stereochemistry.



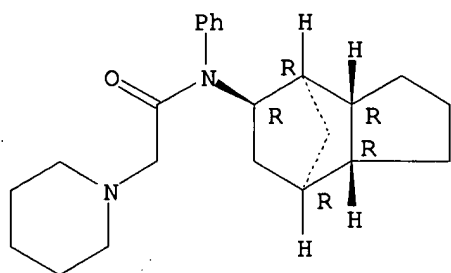
L4 ANSWER 10 OF 16 CAPLUS COPYRIGHT 2003 ACS
 AN 1985:197548 CAPLUS
 DN 102:197548
 TI Synthesis and pharmacological activity of derivatives of
 exo-trimethylenenorbornane. V
 AU Longobardi, M.; Schenone, P.; Bargagna, A.; Matera, C.; Rossi, F.; Marmo,
 E.
 CS Ist. Sci. Farm., Univ. Genova, Genoa, Italy
 SO Farmaco, Edizione Scientifica (1985), 40(3), 162-9
 CODEN: FRPSAX; ISSN: 0430-0920
 DT Journal
 LA English
 AB Seven amides I (R = CH₂Cl, Me, cyclopropyl, CH:CHPh, Ph, 4-NO₂C₆H₄, and
 4-H₂NC₆H₄) and 6 glycinamides II (R = NEt₂, NMe(CH₂)₂NMe₂, pyrrolidino,
 piperidino, morpholino, N'-methylpiperazino) derived from
 N-phenyl-exo-5,6-trimethylenenorbornan-2-endo-amine [96356-45-5] were
 prepd. and tested for pharmacol. activity. All of the I derivs. showed
 moderate hypotensive activity whereas some of the I and II derivs. had
 weak local anesthetic and antiarrhythmic activity. The effects of the
 compds. on heart rate are also described.
 IT ~~96356-40-0P 96356-41-1P 96356-42-2P~~
~~96356-43-3P~~
 RL: BAC (Biological activity or effector, except adverse); BPR (Biological
 process); BSU (Biological study, unclassified); SPN (Synthetic
 preparation); THU (Therapeutic use); BIOL (Biological study); PREP
 (Preparation); PROC (Process); USES (Uses)
 (prepn. and pharmacol. of)
 RN 96356-40-0 CAPLUS
 CN 1-Pyrrolidineacetamide, N-(octahydro-4,7-methano-1H-inden-5-yl)-N-phenyl-,
 (3a.alpha.,4.beta.,5.alpha.,7.beta.,7a.alpha.)- (9CI) (CA INDEX NAME)

Relative stereochemistry.



RN 96356-41-1 CAPLUS
 CN 1-Piperidineacetamide, N-(octahydro-4,7-methano-1H-inden-5-yl)-N-phenyl-,
 (3a.alpha.,4.beta.,5.alpha.,7.beta.,7a.alpha.)- (9CI) (CA INDEX NAME)

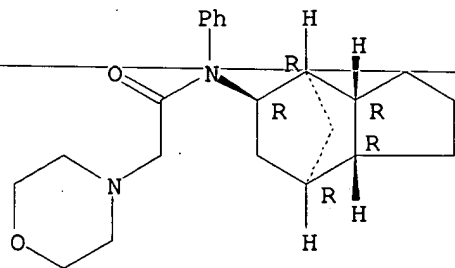
Relative stereochemistry.



RN 96356-42-2 CAPLUS

CN 4-Morpholineacetamide, N-(octahydro-4,7-methano-1H-inden-5-yl)-N-phenyl-, (3a.alpha.,4.beta.,5.alpha.,7.beta.,7a.alpha.)- (9CI) (CA INDEX NAME)

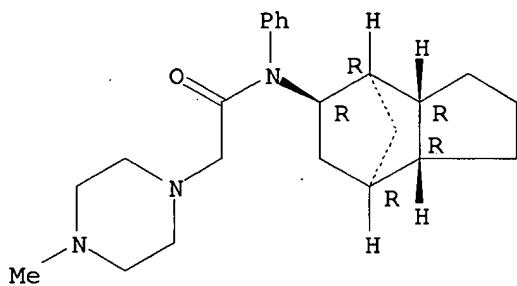
Relative stereochemistry.



RN 96356-43-3 CAPLUS

CN 1-Piperazineacetamide, 4-methyl-N-(octahydro-4,7-methano-1H-inden-5-yl)-N-phenyl-, (3a.alpha.,4.beta.,5.alpha.,7.beta.,7a.alpha.)- (9CI) (CA INDEX NAME)

Relative stereochemistry.



L4 ANSWER 11 OF 16 CAPLUS COPYRIGHT 2003 ACS
 AN 1983:34595 CAPLUS
 DN 98:34595
 TI 5-Fluorouracil derivatives, and their pharmaceutical compositions
 IN Takaya, Takao; Tozuka, Zenzaburo
 PA Fujisawa Pharmaceutical Co., Ltd. , USA
 SO U.S., 20 pp. Cont.-in-part of U.S. Ser. No. 89,399, abandoned.
 CODEN: USXXAM
 DT Patent
 LA English
 FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 4349552	A	19820914	US 1980-111643	19800114
	JP 55081865	A2	19800620	JP 1979-140983	19791030
	ES 485554	A1	19801101	ES 1979-485554	19791030
PRAI	GB 1978-42426		19781030		
	GB 1979-2195		19790122		
	GB 1979-9522		19790319		
	GB 1979-19439		19790604		
	CA 1979-338650		19791029		
	JP 1979-140983		19791030		
	US 1979-89399		19791030		

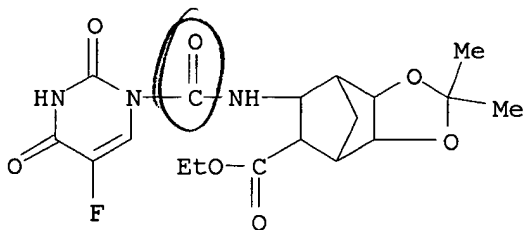
AB Carbamoyluracils I [R = (un)substituted norbornyl, bicyclo[2.2.2]octyl, bicyclo[3.1.1]heptyl, adamantyl] were prepd. Thus 1-adamantylacetic acid was treated with N3P(O) (OPh)₂ to give 1-adamantylmethyl isocyanate which was treated with 5-fluorouracil to give I (R = 1-adamantylmethyl) (II). At 100 mg/kg day for 4 days orally to leukemia P388-infected mice, II gave a 50% increase in life span vs. controls.

IT **76198-22-6P**

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation)
 (prepn. and antitumor activity of)

RN 76198-22-6 CAPLUS

CN 4,7-Methano-1,3-benzodioxole-5-carboxylic acid, 6-[[[(5-fluoro-3,4-dihydro-2,4-dioxo-1(2H)-pyrimidinyl)carbonyl]amino]hexahydro-2,2-dimethyl-, ethyl ester (9CI) (CA INDEX NAME)



L4 ANSWER 12 OF 16 CAPLUS COPYRIGHT 2003 ACS
 AN 1981:47313 CAPLUS
 DN 94:47313
 TI 5-Fluorouracil derivatives and their pharmaceutical compositions
 IN Takaya, Takao; Tozuka, Zenzaburo
 PA Fujisawa Pharmaceutical Co., Ltd., Japan
 SO Eur. Pat. Appl., 87 pp.
 CODEN: EPXXDW

DT Patent
 LA English

FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 10941	A1	19800514	EP 1979-302358	19791029
	EP 10941	B1	19820512		
	R: AT, BE, CH, DE, FR, GB, IT, LU, NL, SE				
	AT 1011	E	19820515	AT 1979-302358	19791029
	ES 485554	A1	19801101	ES 1979-485554	19791030
PRAI	GB 1978-42426		19781030		
	GB 1979-2195		19790122		
	GB 1979-9522		19790319		
	GB 1979-19439		19790604		
	EP 1979-302358		19791029		

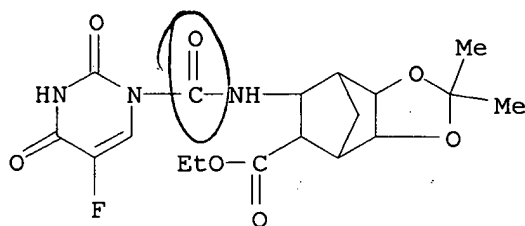
AB Fluorouracils I [R = (un)substituted bridged alicyclic, alkyl, alkenyl, aryl, heterocyclyl, carboxylic acid, and ester] were prepd. Thus, treating 3.88 g II (R1 = CO2H) with 5.50 g (PhO)2P(O)N3 gave II (R1 = NCO), which was treated with 2.60 g 5-fluorouracil to give 1.85 g I (R = 1-adamantylmethyl). The latter compd. increased the survival time of leukemia P-388-infected mice by 50% over controls when given at 100 mg/kg day orally for 4 days.

IT 76198-22-6P

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation)
 (prepn. and antitumor activity of)

RN 76198-22-6 CAPLUS

CN 4,7-Methano-1,3-benzodioxole-5-carboxylic acid, 6-[[[(5-fluoro-3,4-dihydro-2,4-dioxo-1(2H)-pyrimidinyl)carbonyl]amino]hexahydro-2,2-dimethyl-, ethyl ester (9CI) (CA INDEX NAME)



L4 ANSWER 13 OF 16 CAPLUS COPYRIGHT 2003 ACS

AN 1980:141624 CAPLUS

DN 92:141624

TI A molecular receptor model for carboxin

AU Schewe, T.; Mueller, W.; Lyr, H.; Zanke, D.

CS Inst. Physiol. Biol. Chem., Humboldt-Univ. Berlin, Berlin, Ger. Dem. Rep.

SO Abhandlungen der Akademie der Wissenschaften der DDR, Abteilung
Mathematik, Naturwissenschaften, Technik (1979), (2N, Votr. Int. Sym p.:
Systemfungiz., 5th, 1977), 241-51

CODEN: AAWTD2; ISSN: 0138-1059

DT Journal

LA German

AB Data are given on the in vitro effect of 24 carboxin [5234-68-4] derivs.
and analogs I (R = H, tert-Bu, cyclopentyl, cyclohexyl, Ph, substituted
Ph, .alpha.-naphthyl, etc) and R'CONHPh (R' = 2-methyl-1,4-oxanthiin-3-yl,
o-tolyl, o-hydroxyphenyl, 2-methyl-1,4-oxanthiin-3-yl dioxide, etc) on
succinate cytochrome c reductase [9028-10-8] from cattle heart
mitochondrial nonphosphorylating electron-transport particles (Mueller,
W., et al., 1977). The succinate dehydrogenase subunit high-potential
Fe-S protein (Fe S-center S3) seems to be the specific receptor, and the
interaction seems to involve the hydrophobic group at the amide-N, the
2-cis-Me of the oxathiin cycle, and the vinylogous CO group. A model is
given, by which the electrophilic C of the .alpha.-.beta.-unsatd. CO-group
is bound to the cysteine-S of the Fe-S cluster, whereas the N and O are
bound coordinatively to 2 different Fe atoms of the cluster.

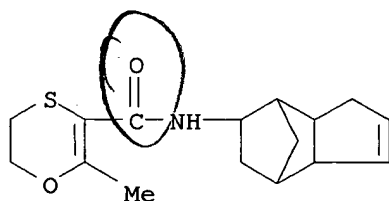
IT 65132-71-0

RL: PROC (Process)

(binding of, to succinate dehydrogenase high-potential iron-sulfur
protein, mol. receptor model in relation to)

RN 65132-71-0 CAPLUS

CN 1,4-Oxathiin-3-carboxamide, N-(3a,4,5,6,7,7a-hexahydro-4,7-methano-1H-
inden-6-yl)-5,6-dihydro-2-methyl- (9CI) (CA INDEX NAME)



L4 ANSWER 14 OF 16 CAPLUS COPYRIGHT 2003 ACS

AN 1978:32999 CAPLUS

DN 88:32999

TI Effective mechanisms of respiratory inhibition by the fungicides of the carboxin group. Effect of oxathiin derivatives and analogs on nonphosphorylating submitochondrial particles from beef heart

AU Mueller, W.; Schewe, T.; Lyr, H.; Zanke, D.

CS Inst. Physiol. Biol. Chem., Humboldt-Univ., Berlin, Ger. Dem. Rep.

SO Zeitschrift fuer Allgemeine Mikrobiologie (1977), 17(5), 359-72

CODEN: ZAPOAK; ISSN: 0044-2208

DT Journal

LA German

AB The inhibitory activity of carboxin (I, R = Ph) [5234-68-4] and of 22 derivs. and analogs, such as I (R = H, cycloalkyl, .alpha.-naphthyl, substituted Ph, etc.) was tested on the succinate-cytochrome c reductase [9028-10-8] and NADH oxidase [9032-21-7] of nonphosphorylating electron-transport particles (ETP) from cattle-heart mitochondria. Some I were also tested on particulate succinic dehydrogenase [9002-02-2] of the carboxin-sensitive *Trametes versicolor* and carboxin-resistant *Trichoderma viride*. The inhibitory activity of I on ETP cytochrome c oxidoreductase correlated well with that on succinic dehydrogenase of *Trametes versicolor*, but not with that on succinic dehydrogenase of *Trichoderma viride*. Thus, cattle-heart ETP is a suitable model for carboxin receptors. Low correlation was shown between the activity of I on cytochrome c oxidoreductase and the hydrophobicity parameter $\lg P$ of I. (P is the octanol to water distribution coeff.). Electronic and steric effects were also evident. A multicenter mechanism is suggested for the receptor-binding of I. Mechanism of resistance to I is discussed.

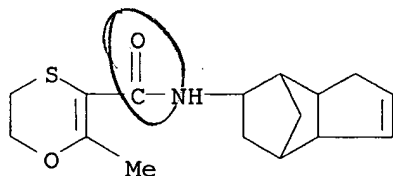
IT 65132-71-0

RL: BIOL (Biological study)

(respiratory enzymes inhibition by, in cattle heart mitochondrial particles, receptors in fungi in relation to)

RN 65132-71-0 CAPLUS

CN 1,4-Oxathiin-3-carboxamide, N-(3a,4,5,6,7,7a-hexahydro-4,7-methano-1H-inden-6-yl)-5,6-dihydro-2-methyl- (9CI) (CA INDEX NAME)



L4 ANSWER 15 OF 16 CAPLUS COPYRIGHT 2003 ACS
 AN 1972:46068 CAPLUS
 DN 76:46068
 TI Fungicidal N-cycloalkyl-2,5-dimethylfuran-3-carboxamides
 IN Distler, Harry; Widder, Rudi; Pommer, Ernst H.
 PA Badische Anilin- und Soda-Fabrik A.-G.
 SO Ger. Offen., 11 pp.
 CODEN: GWXXBX

DT Patent

LA German

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	DE 2019535	A	19711104	DE 1970-2019535	19700423
	DE 2019535	B2	19730405		
	DE 2019535	C3	19870212		
	US 3862966	A	19750128	US 1971-131545	19710405
	ZA 7102428	A	19720223	ZA 1971-2428	19710415
	NL 7105249	A	19711026	NL 1971-5249	19710419
	CA 939364	A1	19740101	CA 1971-110754	19710419
	SE 394675	B	19770704	SE 1971-5109	19710420
	HU 162532	P	19730328	HU 1971-BA2571	19710421
	BE 766110	A1	19711022	BE 1971-102516	19710422
	AT 305694	B	19730312	AT 1971-3467	19710422
	GB 1338834	A	19731128	GB 1971-10767	19710422
	DK 128221	B	19740325	DK 1971-1937	19710422
	SU 434635	D	19740630	SU 1971-1651491	19710422
	PL 77193	P	19750430	PL 1971-147718	19710422
	CS 165976	P	19751222	CS 1971-2925	19710422
	FR 2090665	A5	19720114	FR 1971-14632	19710423
	CH 539388	A	19730914	CH 1971-5950	19710423
	US 3903293	A	19750902	US 1973-361811	19730518
PRAI	DE 1970-2019535		19700423		
	US 1971-131545		19710405		

AB Title compds. (I; R=H or Me, R1=tricyclodecyl, cyclohexyl, or methylcyclohexyl), useful as, e.g. sprays and powders, were prepd. in 86.5-98.9% yield by reaction of 2,5-dimethylfuran-3-carbonyl chloride (II) with HNRR1 and used at 0.005-0.01% against, e.g. Rhizoctonia solani and Uromyces appendiculatus. Thus, II and Et3N were simultaneously added to cyclohexylamine in ClCH2CH2Cl at 25-35.degree. and the mixt. was stirred 3 hr at 35.degree. to give 96.8% I (R=H, R1=cyclohexyl). Similarly prepd. were 5 other I, e.g. (R and R1 given): Me, cyclohexyl; and H, tricyclo[5.2.1.0.2,6]dec-8-yl. Compns. contg. I were reported.

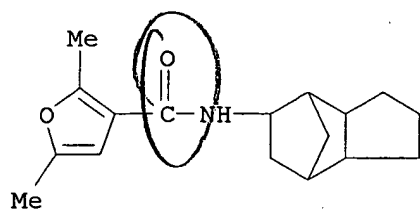
IT 34849-41-7P

RL: SPN (Synthetic preparation); PREP (Preparation)
 (prepn. of)

RN 34849-41-7 CAPLUS

CN 3-Furancarboxamide, 2,5-dimethyl-N-(octahydro-4,7-methano-1H-inden-5-yl)-
 (9CI) (CA INDEX NAME)

10/020,241



A large, stylized handwritten mark, possibly a signature or a checkmark, is drawn over the chemical structure.

L4 ANSWER 16 OF 16 CAPLUS COPYRIGHT 2003 ACS
 AN 1965:2797 CAPLUS
 DN 62:2797
 OREF 62:460e-g
 TI N-(5,6-Dihydrodicyclopentadien-5-yl)ureas as herbicides
 PA Farbwerke Hoechst A.-G.
 SO 15 pp.
 DT Patent
 LA Unavailable
 FAN.CNT 1

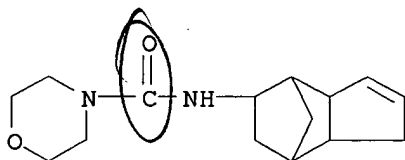
	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	FR 1372831		19640918	FR	
PRAI	DE		19621011		

AB 5,6-Dihydrodicyclopentadien-5-yl isocyanate (I) is treated with amines to give compds. of the general formula II. COCl₂ is introduced into a mixt. of 223 g. 5,6-dihydrodicyclopentadien-5-ylamine in 250 ml. PhMe at between -5.degree. and 0.degree. and the mixt. agitated 1/2 hr. and heated to 100-10.degree. to give 95.5% I, b₈ 111-13.degree., n_{20D} 1.5188. I (0.3 mole) is dissolved in 200 ml. PhMe, 38 g. 40% Me₂NH added in 20 min., the temp. rises to 40.degree., and the mixt. agitated 3 hrs. at 40.degree., cooled, and filtered to give 64 g. N-(5,6-dihydrodicyclopentadien-5-yl)-N1,N1-dimethylurea (III), m. 151-2.degree. (petr. ether). Similarly prepd. are the following II (R, R1, and m.p. given): Me, MeO, 78-9.degree. (petr. ether); iso-Bu, iso-Bu, 136-7.degree. (PhMe). A compn. contg. 25% III, 64% active H₄SiO₄, 10% cellulose pitch, and 1% Na salt of oleic acid methyltauride is prepd.

IT **4313-64-8**, 4-Morpholinecarboxamide, N-(3a,4,5,6,7,7a-hexahydro-4,7-methanoinden-5-yl)-
 (prepn. of)

RN 4313-64-8 CAPLUS

CN 4-Morpholinecarboxamide, N-(3a,4,5,6,7,7a-hexahydro-4,7-methanoinden-5-yl)-
 (7CI, 8CI) (CA INDEX NAME)



=> d his

(FILE 'HOME' ENTERED AT 19:16:29 ON 01 JUL 2003)

FILE 'REGISTRY' ENTERED AT 19:16:34 ON 01 JUL 2003

L1 STRUCTURE UPLOADED

L2 1 S L1 SSS SAM

L3 72 S L1 SSS FUL

FILE 'CAPLUS' ENTERED AT 19:17:56 ON 01 JUL 2003

L4 16 S L3

FILE 'CAOLD' ENTERED AT 19:18:35 ON 01 JUL 2003

=> s l3

L5 1 L3

=> d l5 bib,hitstr

L5 ANSWER 1 OF 1 CAOLD COPYRIGHT 2003 ACS

AN CA62:460e CAOLD

TI N-(5,6-dihydrodicyclopentadien-5-yl)ureas as herbicides

PA Farbwerke Hoechst A.-G.

DT Patent

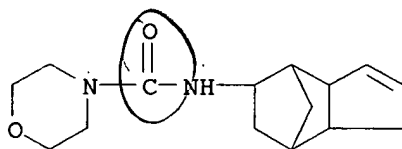
PATENT NO.	KIND	DATE
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PI	FR 1372831	
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IT	4313-64-8	
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RN	4313-64-8 CAOLD	
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CN	4-Morpholinecarboxamide, N-(3a,4,5,6,7,7a-hexahydro-4,7-methanoinden-5-yl)- (7CI, 8CI) (CA INDEX NAME)	
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10/020,241

=> log y

COST IN U.S. DOLLARS

SINCE FILE

TOTAL

ENTRY

SESSION

FULL ESTIMATED COST

3.02

224.77

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)

SINCE FILE

TOTAL

ENTRY

SESSION

CA SUBSCRIBER PRICE

0.00

-10.42

STN INTERNATIONAL LOGOFF AT 19:18:56 ON 01 JUL 2003

Sleep apnea

Date 2003/6/30 18:00:01

Topic: Sleep

Sleep apnea is a serious, potentially lifethreatening condition that is far more common than generally understood. First described in 1965, sleep apnea is a breathing disorder characterized by brief interruptions of breathing during sleep. It owes its name to a Greek word, apnea, meaning "want of breath." There are two types of sleep apnea: central and obstructive. Central sleep apnea, which is less common, occurs when the brain fails to send the appropriate signals to the breathing muscles to initiate respirations.

Obstructive sleep apnea is far more common and occurs when air cannot flow into or out of the person's nose or mouth although efforts to breathe continue.

In a given night, the number of involuntary breathing pauses or "apneic events" may be as high as 20 to 30 or more per hour. These breathing causes are almost always accompanied by snoring between apnea episodes, although not everyone who snores has this condition. Sleep apnea can also be characterized by choking sensations. The frequent interruptions of deep, restorative sleep often lead to early morning headaches and excessive daytime sleepiness. Early recognition and treatment of sleep apnea is important because it may be associated with irregular heartbeat, high blood pressure, heart attack, and stroke.

WHO GETS SLEEP APNEA?

Sleep apnea occurs in all age groups and both sexes but is more common in men (it may be underdiagnosed in women) and possibly young African Americans. It has been estimated that as many as 18 million Americans have sleep apnea. Four percent of middle-aged men and 2 percent of middle-aged women have sleep apnea along with excessive daytime sleepiness. People most likely to have or develop sleep apnea include those who snore loudly and also are overweight, or have high blood pressure, or have some physical abnormality in the nose, throat, or other parts of the upper airway.

Sleep apnea seems to run in some families, suggesting a possible genetic basis.

WHAT CAUSES SLEEP APNEA?

Certain mechanical and structural problems in the airway cause the interruptions in breathing during sleep. In some people, apnea occurs when the throat muscles and tongue relax during sleep and partially block the opening of the airway. When the muscles of the soft palate at the base of the tongue and the uvula (the small fleshy tissue hanging from the center of the back of the throat) relax and sag, the airway becomes blocked, making breathing labored and noisy and even stopping it altogether. Sleep apnea also can occur in obese people when an excess amount of tissue in the airway causes it to be narrowed. With a narrowed airway, the person continues his or her efforts to breathe, but air cannot easily flow into or out of the nose or mouth. Unknown to the person, this results in heavy snoring, periods of no breathing,

and frequent arousals (causing abrupt changes from deep sleep to light sleep).

Ingestion of alcohol and sleeping pills increases the frequency and duration of breathing pauses in people with sleep apnea.

HOW IS NORMAL BREATHING RESTORED DURING SLEEP?

During the apneic event, the person is unable to breathe in oxygen and to exhale carbon dioxide, resulting in low levels of oxygen and increased levels of carbon dioxide in the blood. The reduction in oxygen and increase in carbon dioxide alert the brain to resume breathing and cause an arousal. With each arousal, a signal is sent from the brain to the upper airway muscles to open the airway;

breathing is resumed, often with a loud snort or gasp. Frequent arousals, although necessary for breathing to restart, prevent the patient from getting enough restorative, deep sleep.

WHAT ARE THE EFFECTS OF SLEEP APNEA?

Because of the serious disturbances in their normal sleep patterns, people with sleep apnea often feel very sleepy during the day and their concentration and daytime performance suffer. The lifethreatening. They include depression, irritability, sexual dysfunction, learning and memory difficulties, and falling asleep while at work, on the phone, or driving. It has been estimated that up to 50 percent of sleep apnea patients have high blood pressure. Although it is not known with certainty if there is a cause and effect relationship, it appears that sleep apnea contributes to high blood pressure. Risk for heart attack and stroke may also increase in those with sleep apnea. In addition, sleep apnea is sometimes implicated in sudden infant death syndrome.

WHEN SHOULD SLEEP APNEA BE SUSPECTED?

For many sleep apnea patients, their spouses are the first ones to suspect that something is wrong, usually from their heavy snoring and apparent struggle to breathe. Coworkers or friends of the sleep apnea victim may notice that the individual falls asleep during the day at inappropriate times (such as while driving a car, working, or talking). The patient often does not know he or she has a problem and may not believe it when told. It is important that the person see a doctor for evaluation of the sleep problem.

HOW IS SLEEP APNEA DIAGNOSED?

In addition to the primary care physician, pulmonologists, neurologists, or other physicians with specialty training in sleep disorders may be involved in making a definitive diagnosis and initiating treatment. Diagnosis of sleep apnea is not simple because there can be many different reasons for disturbed sleep.

Several tests are available for evaluating a person for sleep apnea. Polysomnography is a test that records a variety of body functions during sleep, such as the electrical activity of the brain, eye movement, muscle activity, heart rate, respiratory effort, air flow, and blood oxygen levels. These tests are used both to diagnose sleep apnea and to determine its severity.

The Multiple Sleep Latency Test (MSLT) measures the speed of falling asleep. In this test, patients are

given several opportunities to fall asleep during the course of a day when they would normally be awake.

For each opportunity, time to fall asleep is measured. People without sleep problems usually take an average of 10 to 20 minutes to fall asleep. Individuals who fall asleep in less than 5 minutes are likely to require some treatment for sleep disorders.

The MSLT may be useful to measure the degree of excessive daytime sleepiness and to rule out other types of sleep disorders. Diagnostic tests usually are performed in a sleep center, but new technology may allow some sleep studies to be conducted in the patient's home.

HOW IS SLEEP APNEA TREATED?

The specific therapy for sleep apnea is tailored to the individual patient based on medical history, physical examination, and the results of polysomnography. Medications are generally not effective in the treatment of sleep apnea. Oxygen administration may safely benefit certain patients but does not eliminate sleep apnea or prevent daytime sleepiness.

Thus, the role of oxygen in the treatment of sleep apnea is controversial, and it is difficult to predict which patients will respond well. It is important that the effectiveness of the selected treatment be verified; this is usually accomplished by polysomnography.

Behavioral Therapy

Behavioral changes are an important part of the treatment program, and in mild cases behavioral therapy may be all that is needed. The individual should avoid the use of alcohol, tobacco, and sleeping pills, which make the airway more likely to collapse during sleep and prolong the apneic periods. Overweight persons can benefit from losing weight. Even a 10 percent weight loss can reduce the number of apneic events for most patients. In some patients with mild sleep apnea, breathing pauses occur only when they sleep on their backs. In such cases, using pillows and other devices that help them sleep in a side position is often helpful.

Physical or Mechanical Therapy

Nasal continuous positive airway pressure (CPAP) is the most common effective treatment for sleep apnea. In this procedure, the patient wears a mask over the nose during sleep, and pressure from an air blower forces air through the nasal passages. The air pressure is adjusted so that it is just enough to prevent the throat from collapsing during sleep. The pressure is constant and continuous.

Nasal CPAP prevents airway closure while in use, but apnea episodes return when CPAP is stopped or used improperly. Variations of the CPAP device attempt to minimize side effects that sometimes occur, such as nasal irritation and drying, facial skin irritation, abdominal bloating, mask leaks, sore eyes, and headaches. Some versions of CPAP vary the pressure to coincide with the person's breathing pattern, and others start with low pressure, slowly increasing it to allow the person to fall asleep before the full prescribed pressure is applied.

Dental appliances that reposition the lower jaw and the tongue have been helpful to some

patients with mild sleep apnea or who snore but do not have apnea. Possible side effects include damage to teeth, soft tissues, and the jaw joint. A dentist or orthodontist is often the one to fit the patient with such a device. Surgery Some patients with sleep apnea may need surgery. Although several surgical procedures are used to increase the size of the airway, none of them is completely successful or without risks. More than one procedure may need to be tried before the patient realizes any benefits. Some of the more common procedures include removal of adenoids and tonsils (especially in children), nasal polyps or other growths, or other tissue in the airway and correction of structural deformities. Younger patients seem to benefit from these surgical procedures more than older patients.

Uvulopalatopharyngoplasty (UPPP) is a procedure used to remove excess tissue at the back of the throat (tonsils, uvula, and part of the soft palate).

The success of this technique may range from 30 to 50 percent. The long-term side effects and benefits are not known, and it is difficult to predict which patients will do well with this procedure.

Laser-assisted uvulopalatoplasty (LAUP) is done to eliminate snoring but has not been shown to be effective in treating sleep apnea. This procedure

~~involves using a laser device to eliminate tissue in the back of the throat.~~ Like UPPP, LAUP may

decrease or eliminate snoring but not sleep apnea itself. Elimination of snoring, the primary symptom of sleep apnea, without influencing the condition

may carry the risk of delaying the diagnosis and possible treatment of sleep apnea in patients who elect LAUP. To identify possible underlying

sleep apnea, sleep studies are usually required before LAUP is performed. Tracheostomy is used in persons with severe, life-threatening sleep apnea. In this procedure, a small hole is made in the windpipe and a tube is inserted into the opening. This tube stays closed during waking hours, and the

person breathes and speaks normally. It is opened for sleep so that air flows directly into the lungs, bypassing any upper airway obstruction. Although

this procedure is highly effective, it is an extreme measure that is poorly tolerated by patients and rarely used. Other procedures. Patients in whom

sleep apnea is due to deformities of the lower jaw may benefit from surgical reconstruction.

Finally, surgical procedures to treat obesity are sometimes recommended for sleep apnea patients who are morbidly obese.

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- Chronic intermittent hypoxia decreases the expression of Na/H exchangers and HCO₃-dependent transporters in mouse CNS.
 J Appl Physiol. 2003 Jul;95(1):292-9. Epub 2003 Mar 28.
 PMID: 12665539 [PubMed - in process]
- ☐ 2: [Abu-Shaweesh JM, Dreshaj IA, Martin RJ, Wirth KJ, Heinelt U, Haxhiu MA.](#) [Related Articles, Links](#)
- Inhibition of Na(+)/H(+) exchanger type 3 reduces duration of apnea induced by laryngeal stimulation in piglets.
 Pediatr Res. 2002 Sep;52(3):459-64.
 PMID: 12193685 [PubMed - indexed for MEDLINE]
- ☐ 3: [Gill RK, Saksena S, Syed IA, Tyagi S, Alrefai WA, Malakooti J, Ramaswamy K, Dudeja PK.](#) [Related Articles, Links](#)
- Regulation of NHE3 by nitric oxide in Caco-2 cells.
 Am J Physiol Gastrointest Liver Physiol. 2002 Sep;283(3):G747-56.
 PMID: 12181191 [PubMed - indexed for MEDLINE]
- ☐ 4: [Gekle M, Serrano OK, Drumm K, Mildenerberger S, Freudinger R, Gassner B, Jansen HW, Christensen EI.](#) [Related Articles, Links](#)
- NHE3 serves as a molecular tool for cAMP-mediated regulation of receptor-mediated endocytosis.
 Am J Physiol Renal Physiol. 2002 Sep;283(3):F549-58.
 PMID: 12167607 [PubMed - indexed for MEDLINE]
- ☐ 5: [Claiborne JB, Edwards SL, Morrison-Shetlar AI.](#) [Related Articles, Links](#)
- Acid-base regulation in fishes: cellular and molecular mechanisms.
 J Exp Zool. 2002 Aug 1;293(3):302-19. Review.
 PMID: 12115903 [PubMed - indexed for MEDLINE]
- ☐ 6: [Tsuganezawa H, Sato S, Yamaji Y, Preisig PA, Moe OW, Alpern RJ.](#) [Related Articles, Links](#)
- Role of c-SRC and ERK in acid-induced activation of NHE3.
 Kidney Int. 2002 Jul;62(1):41-50.
 PMID: 12081562 [PubMed - indexed for MEDLINE]
- ☐ 7: [Capasso G, Unwin R, Rizzo M, Pica A, Giebisch G.](#) [Related Articles, Links](#)
- Bicarbonate transport along the loop of Henle: molecular mechanisms and regulation.
 J Nephrol. 2002 Mar-Apr;15 Suppl 5:S88-96. Review.
 PMID: 12027225 [PubMed - indexed for MEDLINE]
- ☐ 8: [Cussac D, Schaak S, Gales C, Flordellis C, Denis C, Paris H.](#) [Related Articles, Links](#)
- alpha(2B)-Adrenergic receptors activate MAPK and modulate proliferation of primary cultured proximal tubule cells.
 Am J Physiol Renal Physiol. 2002 May;282(5):F943-52.
 PMID: 11934705 [PubMed - indexed for MEDLINE]
- ☐ 9: [Al-Bazzaz FJ, Hafez N, Tyagi S, Gailey CA, Toofanfard M, Alrefai WA, Nazir TM, Ramaswamy K, Dudeja PK.](#) [Related Articles, Links](#)

-  Detection of Cl--HCO3- and Na+-H+ exchangers in human airways epithelium.
JOP. 2001 Jul;2(4 Suppl):285-90.
PMID: 11875273 [PubMed - indexed for MEDLINE]
- ☐ 10: [Kiwull-Schone H, Wiemann M, Frede S, Bingmann D, Wirth KJ, Heinelt U, Lang HJ, Kiwull P.](#) Related Articles, Links
A novel inhibitor of the Na+/H+ exchanger type 3 activates the central respiratory CO2 response and lowers the apneic threshold.
Am J Respir Crit Care Med. 2001 Oct 1;164(7):1303-11.
PMID: 11673226 [PubMed - indexed for MEDLINE]
-  ☐ 11: [Karumanchi SA, Jiang L, Knebelmann B, Stuart-Tilley AK, Alper SL, Sukhatme VP.](#) Related Articles, Links
VHL tumor suppressor regulates Cl-/HCO3- exchange and Na+/H+ exchange activities in renal carcinoma cells.
Physiol Genomics. 2001 Apr 2;5(3):119-28.
PMID: 11285365 [PubMed - indexed for MEDLINE]
-  ☐ 12: [Kim GH, Martin SW, Fernandez-Llama P, Masilamani S, Packer RK, Knepper MA.](#) Related Articles, Links
Long-term regulation of renal Na-dependent cotransporters and ENaC: response to altered acid-base intake.
Am J Physiol-Renal-Physiol. 2000-Sep;279(3):F459-67.
PMID: 10966925 [PubMed - indexed for MEDLINE]
- ☐ 13: [Chow CW, Khurana S, Woodside M, Grinstein S, Orlowski J.](#) Related Articles, Links
 The epithelial Na(+)/H(+) exchanger, NHE3, is internalized through a clathrin-mediated pathway.
J Biol Chem. 1999 Dec 31;274(53):37551-8.
PMID: 10608808 [PubMed - indexed for MEDLINE]
- ☐ 14: [Evans RL, Bell SM, Schultheis PJ, Shull GE, Melvin JE.](#) Related Articles, Links
 Targeted disruption of the Nhe1 gene prevents muscarinic agonist-induced up-regulation of Na(+)/H(+) exchange in mouse parotid acinar cells.
J Biol Chem. 1999 Oct 8;274(41):29025-30.
PMID: 10506152 [PubMed - indexed for MEDLINE]
- ☐ 15: [Kim GH, Ecelbarger C, Knepper MA, Packer RK.](#) Related Articles, Links
 Regulation of thick ascending limb ion transporter abundance in response to altered acid/base intake.
J Am Soc Nephrol. 1999 May;10(5):935-42.
PMID: 10232678 [PubMed - indexed for MEDLINE]
- ☐ 16: [Wang T, Giebisch G.](#) Related Articles, Links
 Tubule function in transgenic mice.
Exp Nephrol. 1998 Sep-Oct;6(5):447-53. Review.
PMID: 9730661 [PubMed - indexed for MEDLINE]

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☐ 1: [Hayashi H, Szaszi K, Grinstein S.](#)

Related Articles, Links

Multiple modes of regulation of Na⁺/H⁺ exchangers.

Ann N Y Acad Sci. 2002 Nov;976:248-58. Review.

PMID: 12502567 [PubMed - indexed for MEDLINE]

☐ 2: [du Cheyron D, Paillard M, Poggioli J.](#)

Related Articles, Links

[Regulation of the luminal Na⁺/H⁺ exchanger NHE3 by intracellular protein trafficking]

Nephrologie. 2002;23(5):219-24. Review. French.

PMID: 12227255 [PubMed - indexed for MEDLINE]

☐ 3: [Aronson PS.](#)

Related Articles, Links



Ion exchangers mediating NaCl transport in the renal proximal tubule.

Cell Biochem Biophys. 2002;36(2-3):147-53. Review.

PMID: 12139400 [PubMed - indexed for MEDLINE]

☐ 4: [Igarashi T, Sekine T, Inatomi J, Seki G.](#)

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Unraveling the molecular pathogenesis of isolated proximal renal tubular acidosis.

J Am Soc Nephrol. 2002 Aug;13(8):2171-7. Review.

PMID: 12138151 [PubMed - indexed for MEDLINE]

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PMID: 12115903 [PubMed - indexed for MEDLINE]

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The role of endothelin in proximal tubule proton secretion and the adaptation to a chronic metabolic acidosis.

J Nephrol. 2002 Mar-Apr;15 Suppl 5:S75-87. Review.

PMID: 12027224 [PubMed - indexed for MEDLINE]

☐ 8: [Lee MG, Ahn W, Lee JA, Kim JY, Choi JY, Moe OW, Milgram SL, Muallem S, Kim KH.](#)

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Coordination of pancreatic HCO₃⁻ secretion by protein-protein interaction between membrane transporters.

JOP. 2001 Jul;2(4 Suppl):203-6. Review.

PMID: 11875260 [PubMed - indexed for MEDLINE]

☐ 9: [Wiemann M, Bingmann D.](#)

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Ventrolateral neurons of medullary organotypic cultures: intracellular pH regulation and bioelectric activity.

Respir Physiol. 2001 Dec;129(1-2):57-70. Review.
PMID: 11738646 [PubMed - indexed for MEDLINE]

☐ 10: [Schnermann J.](#)

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Sodium transport deficiency and sodium balance in gene-targeted mice.

Acta Physiol Scand. 2001 Sep;173(1):59-66. Review.
PMID: 11678727 [PubMed - indexed for MEDLINE]

☐ 11: [Voltz JW, Weinman EJ, Shenolikar S.](#)

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Expanding the role of NHERF, a PDZ-domain containing protein adapter, to growth regulation.

Oncogene. 2001 Oct 1;20(44):6309-14. Review.
PMID: 11607833 [PubMed - indexed for MEDLINE]

☐ 12: [Knepper MA, Brooks HL.](#)

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Regulation of the sodium transporters NHE3, NKCC2 and NCC in the kidney.

Curr Opin Nephrol Hypertens. 2001 Sep;10(5):655-9. Review.
PMID: 11496061 [PubMed - indexed for MEDLINE]

☐ 13: [Weinman EJ, Steplock D, Shenolikar S.](#)

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Acute regulation of NHE3 by protein kinase A requires a multiprotein signal complex.

Kidney Int. 2001-Aug;60(2):450-4. Review.
PMID: 11473625 [PubMed - indexed for MEDLINE]

☐ 14: [Ritter M, Fuerst J, Woll E, Chwatal S, Gschwentner M, Lang F, Deetjen P, Paulmichl M.](#)

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Na(+)/H(+)exchangers: linking osmotic dysequilibrium to modified cell function.

Cell Physiol Biochem. 2001;11(1):1-18. Review.
PMID: 11275678 [PubMed - indexed for MEDLINE]

☐ 15: [Donowitz M, Janecki A, Akhter S, Cavet ME, Sanchez F, Lamprecht G, Zizak M, Kwon WL, Khurana S, Yun CH, Tse CM.](#)

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Short-term regulation of NHE3 by EGF and protein kinase C but not protein kinase A involves vesicle trafficking in epithelial cells and fibroblasts.

Ann N Y Acad Sci. 2000;915:30-42. Review.
PMID: 11193592 [PubMed - indexed for MEDLINE]

☐ 16: [Shenolikar S, Weinman EJ.](#)

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NHERF: targeting and trafficking membrane proteins.

Am J Physiol Renal Physiol. 2001 Mar;280(3):F389-95. Review.
PMID: 11181400 [PubMed - indexed for MEDLINE]

☐ 17: [Szasz K, Grinstein S, Orlowski J, Kapus A.](#)

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Regulation of the epithelial Na(+)/H(+) exchanger isoform by the cytoskeleton.

Cell Physiol Biochem. 2000;10(5-6):265-72. Review.
PMID: 11125205 [PubMed - indexed for MEDLINE]

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Comparative roles of the renal apical sodium transport systems in blood pressure control.

J Am Soc Nephrol. 2000 Nov;11 Suppl 16:S135-9. Review.
PMID: 11065345 [PubMed - indexed for MEDLINE]

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Why should a clinician care about the molecular biology of transport?

Curr Gastroenterol Rep. 2000;2(5):378-86.
PMID: 10998665 [PubMed - in process]

☐ 20: [Weinman EJ, Minkoff C, Shenolikar S.](#)

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Signal complex regulation of renal transport proteins: NHERF and regulation of NHE3.



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Am J Physiol Renal Physiol. 2000 Sep;279(3):F393-9. Review.

PMID: 10966919 [PubMed - indexed for MEDLINE]

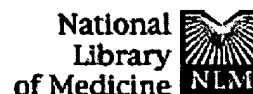
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S3226, a novel NHE3 inhibitor, attenuates ischemia-induced acute renal failure in rats.

Hropot M, Juretschke HP, Langer KH, Schwark JR.

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BACKGROUND: Acute renal failure (ARF) remains a major problem in clinical nephrology characterized by sudden loss of the kidney function due to ischemia, trauma, and/or nephrotoxic drugs. The current therapy of ARF is symptomatic with mortality rates exceeding 50%. The aim of this study was to investigate the effects of an intravenous infusion of S3226 (3-[2-(3-guanidino-2-methyl-3-oxopropenyl)-5-methyl-phenyl]-N-isopropylidene-2-methyl-acrylamide dihydrochloride), a selective Na⁺/H⁺ exchange subtype 3 (NHE3) blocker, in ischemia-induced ARF in rats. In a second series of experiments cytosolic pH (pHi) changes in the kidney during ARF were continuously measured by means of nuclear magnetic resonance spectroscopy (MRS). **METHODS:** ARF was induced by bilateral occlusion of renal arteries for 40 minutes in three groups of anaesthetized Wistar rats. Control rats (N = 12) were infused with saline (6.25 mL/kg over 30 min) before occlusion and the compound groups (each N = 12) were infused with S3226 at a dose of 20 mg/kg over 30 minutes either before initiation of ischemia or immediately after release of clamps. Plasma creatinine (PCr), creatinine clearance (CCr), urine volume, sodium, and potassium excretion were determined up to seven days after release of clamps. In the second series of experiments in anaesthetized rats the left kidney was exposed by flank incision and fixed in a non-magnetic device. An inflatable cuff was positioned around the pedicle to induce ischemia without removing animals from the magnet. A double-tuned ¹H-³¹P home-built surface coil was placed above the exposed kidney for the detection of pHi. **RESULTS:** At day 1 after ischemia CCr in the control group was significantly lower as compared to S3226-treated animals (control 0.30 +/- 0.05 vs. before 0.90 +/- 0.26 and reperfusion 0.83 +/- 0.15 mL/min/kg, respectively). PCr increased from 18 +/- 0.1 micromol/L before occlusion to 245 +/- 7 micromol/L in the control. The increase in PCr was significantly lower in the S3226 treated groups on days 1, 2, and 3 post-infusion. Fractional sodium excretion decreased significantly from 8.17% in the control to 1.42% and 1.88% in the treated groups. Renal pHi was significantly decreased by 0.15 units versus control during reperfusion. Histological examination of the kidneys on day 7 revealed pronounced reduction of tubular necrosis, dilatation, protein casts and cellular infiltration. **CONCLUSIONS:** These results demonstrate that an intravenous administration of S3226 acutely improves GFR and kidney function and structure in both treated groups. In addition, in a separate set of studies S3226 significantly decreased post-occlusion renal pHi values. Thus, the inhibition of NHE3 with S3226 may be beneficial in treatment of ischemic ARF.